

TOWARD A MODEL OF LEADERSHIP PERSISTENCE
IN SMALL GROUP INTERACTIONS

BY

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By

Patricia Ann Brown

1940/1941

To GILG WOODFILL
my dearest friend, my life partner

You share every joy
and every pain of my life.
You bring meaning to it all.

Thank you for sharing with me
the joys and frustrations
of this dinner table
and the joy of our companionship.

With love's gift we have become
together.

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REPORT OF DISSERTATION PRESENTED BY THE GRADUATE COUNCIL
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THEORY A MODEL OF LEADERSHIP PERCEPTION
IN GROUP SETTING INTERACTED

By

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August, 1960

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In contrast to trait, style, and behavioral views of leadership, recent theorists suggest leadership is more properly conceptualized as an influence, relational phenomenon. The purpose of the present studies was to provide support for the view that perception of social power leadership is associated with the presence of an influence relationship existing among group members and that this relationship is conveyed through verbal and nonverbal channels.

For study one, it was predicted that strongest perceptions of leadership exist where levels of influence are high (one group member has high degree of influence over other group members) rather than low (members are equally influenced). Further, perception of leadership is more strongly associated with influence levels than levels of leader-like behavior (one group member engages in low or high levels of those behaviors previously listed

by the independent variable of leadership. For study two, it was predicted that influence relationships, thus leadership, would be conveyed along verbal and nonverbal communicative channels.

Study one employed a two (high vs. low levels of influence) by two (high vs. low levels of leader-like behavioral) design. Three scenes were videotaped depicting a simulated group interaction. Experimental conditions were created by varying verbal and nonverbal behaviors of each actor such that either all group members were equally influential and engaged in equal numbers of leader-like behaviors, or one group member was either more influential than other group members, engaged in more leader-like behaviors, or was both more influential and engaged in more leader-like behavior than other group members. Study two experimental conditions were created by presenting audio-visual, visual-only, audio-only, or written transcript-only information of the interactions videotaped for study one.

Results supported the hypotheses. Perception of leadership was related to high levels of influence and was more strongly associated with the influence factor than leader-like behavior factor. Influence relationships were conveyed across verbal and nonverbal channels, with perception of the audio-only channel. Results emphasize the importance of viewing leadership as an influence relationship existing among group members and conveyed through verbal and nonverbal behaviors.

CHAPTER I

INTRODUCTION

The purpose of each of the present investigations is to provide empirical support for recently acknowledged views that: (1) leadership is a relational phenomenon; leadership can exist only as part of an interpersonal relationship; leadership is an attribute of a relationship among people, not an attribute of a single individual; In particular, leadership is properly conceptualized as an influence relationship, and (2) that the most appropriate approach to the study of leadership is one which focuses on the types of interactions occurring amongst group members. This approach is called the interactionist approach. Each study provides information regarding the types of group interactions leading to the perception of leadership. Study one demonstrates that interactional patterns which are indicative of influence relationships existing among group members are strongly associated with the perception of leadership within the group. Study two demonstrates that group interactions occurring along verbal as well as nonverbal channels convey influence and hence, leadership information.

Interest in leadership in small groups has been long-standing and at times, intense. Certainly this reflects the importance of small group membership and leadership roles in our lives. We encounter daily in a variety of small group situations (within the family, in informal social and community organizations, and in more formal business and political groups). Leadership is an important aspect of nearly all of these group memberships. As Hollander (1974) states, "Almost any task related to an organized activity requires leadership, as at least is associated with it. There is nothing so central to the functioning of groups or organizations, whether in government, industry, or any other place in society" (p. 2). Others have noted that of all other concepts in small group process and small group structure, leadership has received the most empirical and theoretical attention (Kanter and Tieder, 1984; Ashforth, 1979; Shaw, 1970).

The following sections of this chapter will provide a review of some of the theoretical and empirical findings which have resulted from years of work in this area. The purpose of this survey is twofold, (i) to provide some review of the knowledge gains made in this area over the years, and (ii) to point out some of the failings of this work in an effort to provide a rationale for the theoretical underpinnings of the present investigation that leadership is a relational phenomenon and in particular an influence relationship, and that the most

social approach in the study of leadership is an interactionist approach. It is suggested here that some of the failings of earlier work center around the inappropriate choice of an approach to the study of leadership (i.e., the trait, style, behavioral, and situational approaches). Further, these approaches were accepted either due to the lack of other approaches regarding the definition of leadership or due to an immature conception of the nature of leadership. With regard to this definitional problem, several researchers have noted that there has been little agreement regarding the nature of leadership (Bass, 1980; Shaw, 1984). Bass (1980) recorded over 210 definitions prior to 1945. More recently, others have noted that there are possibly as many definitions of leadership as there are leadership theories, and finally as many of these as there are psychologists working in the field (Follett, 1971, p. 11). The investigations reported here should serve to clarify the nature of leadership.

Concepts of and Approaches to the Study of Leadership

Trait approach. At least among psychologists, the earliest and most actively pursued approach to the study of leadership involved the search for leadership traits. This approach encompassed hundreds of studies in which leadership theorists, largely in the early part of the century, attempted to identify those personality or other individual attributes which accounted for the leadership

of certain individuals (for discussion of this approach see Bambergh & Lander, 1948; Ash, 1949; Hollander & Julian, 1949). This approach to the study of leadership carried with it an underlying conception of what leadership was: the ability to behave as a leader was assumed to be based upon some underlying, unitary attributes (traits or pattern of attributes located within the individual). Leadership was conceptualized as an aspect of personality: a quality, characteristic, or configuration which accounted for why some individuals rose to positions of leadership, which was presumed to distinguish leaders from non-leaders, and which was held in common by all leaders across variations in time and situation (Fiedler & Stogdill, 1944; Stogdill, 1948).

However, the results of the trait approach have been disappointing. Within the leadership area few considerations across investigations were found. When similarities in the results associated with leadership were found (e.g., traits which were found across a variety of leaders and leadership situations, traits which appeared to distinguish leaders in general from non-leaders) the considerations obtained most often tended to be low (Bambergh & Lander, 1948; Ash, 1949; Hollander & Julian, 1949; Stogdill, 1948; Stogdill, 1949 and Stogdill, 1950). Included among these traits found to correlate at least to some extent, with leadership were the following: In general the leadership status was more often than not

associated with superior intelligence, scholarship, leadership, and knowledge of how to get things done. It was found that non-leaders, leaders tended to be more organized, they had greater verbal fluency, were more persistent, were self-confident, more independent, dependable, and cooperative. They were more aggressive, more lively, and had greater social participation and a greater desire to excel (House, 1944). Other reviews of this literature may be found in Bass (1948), Gill (1948), and Mann (1948).

Second, the view that leadership may be defined in terms of personality traits, that there is one basic personality pattern for leaders regardless of the leader or the type of leadership situation, is not well supported. Further, the approach to the study of leadership which involves the search for and measurement of specific personality traits does not appear to be useful. Both the approach and the underlying view of leadership have been largely abandoned by current social scientists. Numerous studies within this tradition failed altogether to find any consistent pattern of traits which characterized leaders (Gill, 1944). These systems of traits which were found to be associated with leaders (i) did not distinguish leaders from followers to any great degree and (ii) had low consistency across situations. However, as in most of many investigation approaches, there was a few cases where this approach is based on our understanding of leadership. When the situation is taken into account,

certain general classes of traits do appear to exist, at least in some extent, in leadership. Group members' perceptions do make a difference to group performance and would thus be expected to affect that aspect of group behavior to which the leadership concept applies (Bass, 1980, p. 227). Following his review of the trait approach to leadership, Bass concluded that

a person does not become a leader by virtue of his possession of any one particular pattern of personality traits, but the pattern of personal characteristics of the leader must have relevant relationship to the pattern characteristics, activities, and goals of the group of which he is a leader. (p. 129)

In conclusion, despite the fact that personality traits may play some role in terms of group behavior including leader behavior, the trait approach does not appear to be a useful one for understanding the nature of leadership.

Stimulus approach. The next approach to the study of leadership involved the identification and study of styles of leadership (such as autocratic, democratic, laissez-faire; participatory, authoritarian; authoritarian, non-authoritarian; manipulative and directive) and the nature of their effects on groups. This tradition is primarily exemplified by the classic work of Lewin, Lippitt and White (1939) and Lippitt and White (1949). This approach to leadership involved a change in focus in two different ways from the earlier trait approach. First, this approach directed attention away from those individual trait characteristics which predisposed given individuals to

Increasingly, our research attention turned to the $1960s$ of situational and behavioral tendencies associated with different types of leaders or styles of leadership. Thus, this approach acknowledged differences in leaders and focused on these differences in terms of both the attitudes and the behavioral tendencies of leaders. Second, attention was focused for the first time on the effects of leadership behavior on group interaction and various variables such as measures of group productivity and satisfaction.

One problem within this tradition has been the confusion with regard to the term "leadership style." According to Fiedler (1971), some investigators have used the term leadership style to refer to the leader's typical way of behaving. For example, Bennis and Blanchard (1978) define leadership style in terms of the consistent patterns of behavior exhibited when one attempts to influence the activities of others. Attempts to influence may be typically task-oriented or relationship-oriented behavior for some combination of both. Such consistency in behavior is developed over time, eventually coming to be known as the leader's style or leadership personality. This type of definition defines leadership style in terms of the consequences in the behavior of the leader. Other investigators (Fiedler, 1971, for example) define leadership style in terms of both leader and follower behavior and in terms of behavior as well as the motives underlying

than behavior. Thus, leadership style refers to relatively consistent systems of interaction with others in subordinate positions (Follett, 1971, p. 181). Leadership style refers to a consistent pattern of behavioral interaction among both leaders and non-leaders. Further, Follett relates these constancies of interaction to the motivational system of the individual leader (that is, individuals may tend to be more relationship motivated or more task motivated).

While there remain some disagreement regarding the term "leadership style," this approach to the study of leadership was not specifically aimed at clarifying the nature of leadership itself. Rather, the assumption appears to have been made that leadership, regardless of the particular leadership style employed, functioned either to influence relationships among the powerful and their subordinates) or attempts at influence. The goal of this research approach was to examine the effects which various leadership styles had on group cohesiveness, productivity, and satisfaction. Frequently, the assumption was made that although leadership could take many styles or forms, there was one ideal style which was most effective across a variety of situations.

Numerous studies have followed the approach of Levin et al. (1951) in examining the effects of variations of leadership style under diverse conditions (see for example, Follett & McManis, 1974; Greenfield & Price, 1978;

1964, 1968). Indeed, most of the known studies (1959) findings have been replicated. Results of leadership style investigations have shown that markedly different patterns of small group cohesion and outcome factors emerge as a function of differences in leadership style. Such differences include variations in the levels of group member hostility, acceptance, cooperation and reported satisfaction, as well as various qualitative differences in group productivity resulting as a function of authoritarian, democratic, and laissez-faire leadership styles (Gronin, Lippitt, & White, 1968). Other studies have found differences in error rates, the time required for task solution, and group member satisfaction ratings as a function of authoritarian versus non-authoritarian leadership in small groups (Gronin, 1964). Summarizing this research, Gronin (1964) notes that in such investigations, despite the variety of terminology used to describe the leadership styles, researchers are dealing essentially with comparisons of directive and non-directive leadership styles. Further, Gronin reports that the various experimental group member reactions to these group leadership styles are quite consistent across the range of situations and groups tested. That is, members of groups with non-directive leaders, as compared to those with directive leaders, tend to react more positively to the group (1970, p. 124). Evidence regarding the group's productivity shows less consistency across situations although it does

appears that in general the non-directive led groups are less productive than the directive led groups when productivity differences are obtained (Bass, 1980, p. 279).

This approach to leadership has not continued to be useful (particularly within applied settings) in terms of delineating certain basic styles of leadership and in finding commonalities across a wide range of situations in terms of style effects on group interaction and outcome variables. Useful as this approach has been and continues to be with regard to identifying the effects of various leadership styles, it has not served to clarify the nature of leadership or identify those factors associated with the perception or acceptance of leadership in small group situations. This approach took for granted that certain behaviors were leadership behaviors. Groups of these behaviors were grouped to define a particular leadership style. The focus was then placed on the effects these styles had on outcome variables such as group productivity and satisfaction. No attempt was made to clarify the nature of leadership.

Behavioral approach. The next approach which can be identified in the history of the study of leadership has as its primary goal the identification of leadership behaviors. This particular tradition, if it may be called that, is not as clearly distinguished within the literature as a distinct leadership approach as are the trait and style approaches. The primary intent of this approach

to determine which behaviors define leadership, or identify those behaviors (or characteristics of behaviors) which are consistently found in leaders across a variety of situations and which consistently distinguish leaders from non-leaders. The underlying assumption is that there is a set of behaviors which defines leadership in the sense that they are exhibited by all leaders, across situations, and are exhibited only by leaders. This approach that is analogous to the earlier trait approach which focused on identification of leader traits. The behavioral approach is based upon one of the failures of the trait approach and from the impetus provided by the style approach which had already begun to focus on behavior. Unlike the style approach however, the behavioral approach is directed at clarifying the nature of leadership and at specifying which individuals, by virtue of their behavior, will emerge or be perceived of as leaders.

This approach to leadership rests on the distinct conception of leadership as a set of behaviors engaged in by the leader. The leader is one who behaves like a leader (Bass, 1980, 1981). Many research theorists have accepted (either theoretically or operationally) this definition of leadership. This behavioral definition is one of the most frequently used definitions. In Gergen's (1988) summary of various alternative definitions of leadership, he indicates that he preferred the definition of leader as "one who engages in leadership behaviors."

Flinders (1961) argued that leadership should be defined in terms of acts and behaviors and has used each of the following definitions in his own theoretical and empirical work: the "leader is the person who acts like a leader," the "leader is the individual in the group who has the task of describing and coordinating task-related group activities" (p. 2), Campbell (1960) similarly took a behavioral definition of leadership: "he lead is to engage in an act which initiates a response in the determination of others as part of the process of solving a mutual problem" (cited in Witt, 1983, pp. 214-215). Leaders are identified as those who engage in leadership behaviors as by the relative frequency with which they engage in such leadership acts. Other researchers using this conception of leadership include those who use Bales' (1944) scheme for identifying the leader. Leader behavior is characterized as having high levels of performance output consisting of suggestions, opinions, information, and initiating or initiating statements (Gibson & Miller, 1970).

There are, however, serious problems with this type of definition. It is no way approaches a conceptual definition for leadership. It is certainly, an operational definition with obvious empirical usefulness and clarity, but it does not and indeed cannot bring the theoretical any closer to a conceptualization of leadership. In the worst case type of definition runs the risk of circularity. "What is a leader? The leader is the person who engages

is leadership behavior. That is leadership behavior? It is the behavior of one who leads." At best, this conception of leadership becomes based on the point of having practically meaningless when leadership is defined in terms of sets or lists of specific leadership behaviors. That is, "this approach leads to a heterogeneous mass of specific sets that supposedly identify leadership in the group. What constitutes leadership depends upon the view of the person who is looking leadership behavior" (Bass, 1980, p. 174). Further, it depends upon the behaviors which happen to be exhibited by the particular leader in the particular situation just observed. As Bass (1980) concludes, "he shifts the problem of definition from that of defining the leader to that of defining leader behavior or leadership acts has strayed from the particular concepts are (1) but it offers no solution to the definitional problem" (p. 183). In any case, we are left with the problem of deciding what constitutes "leadership behavior" and ultimately this must be decided from within a specified, prior, conceptualization of leadership. The general category must be conceptualized or defined prior to and separately from the identification of the members of that category.

Beyond the difficulties of the underlying conceptualization of leadership which this behavioral approach assumes, we may still go on to survey some of the findings this research approach has offered. "The

psychological literature contains many examples which have attempted to determine what it is that leaders actually do? (Bass, 1980, p. 204), and such studies continue up to the present. Insofar as studies within this tradition are tempted to find specific leader defining behaviors, this approach has met with little success. The behavioral approach has largely failed along similar lines as the trait approach. Research again points to the importance of the situation in calling forth different types of sets of leader behavior, especially when the effectiveness of leader behavior is the focus. Leader behavior has been found to vary considerably from situation to situation behavior which characterized leaders in one task situation does not necessarily characterize leaders in others (Fiedler & Chermis, 1970). As to the search for leader traits, research here indicates the futility of looking for behaviors which would remarkably distinguish leaders from followers. In general, the research shows little if any difference in the types of behaviors exhibited by leaders and followers, although often there do appear to be real differences between these positions as terms of the frequency with which certain behaviors such as directing, planning, controlling, interpreting what was taking place, offering ideas, devising procedures for accomplishing the task, etc. were performed (Fiedler & Chermis, 1974). Fiedler (1971) concludes that the difference between leaders and followers is considerably less

than an arbitrarily selected. Although we can usually identify leaders, there appear to be no specific behaviors in which only leaders engage. Leadership acts are to a greater or lesser degree produced by some group members other than just the leader.

Although this approach has not been fruitful in clarifying the nature of leadership, the approach has been useful in providing lists or descriptions of leader behavior and potential operational definitions of leadership based on those lists. This approach has extended our knowledge of what leader behaviors are or can be, their functions, and allowing us to categorize and describe individual leader behaviors while also allowing for the fact that such behaviors will vary across situations and will vary especially in their effectiveness across differing situational contexts. Further, this wealth of useful information seems to us from a wide variety of methodological and research sources: from the observational studies which attempted to identify features of leader behavior (e.g., Likierman, 1977), the distinguished three main functions of leader behavior: group goal facilitation, individual performance-promotion, and group sociability to these attempts to describe leader behavior (e.g., the research done at Ohio State University and a summary of some of that research by Stogdill and Shiner, 1962, who found four categories which accounted for all leader behavior: consideration, initiating structure, production emphasis and

predicting or social scientists. The first two were found to account for over 80% of leader behavior. This was credited to the work by Bales (1931, 1933) and others who attempted to categorize and delineate leader role behaviors. Research within these traditions may be assessed within the review provided by Sims (1961) and in the work of Bales (1960), Stimpert and Cox (1977), French and Carter (1974), among others.

One particularly well-supported and useful conclusion which may be drawn from the research literature in this area is that leader behavior may be conceptualized as having two primary and distinct dimensions: those of consideration and initiation of structure (GLOBE, 1980) or the provision of noncontingent leadership and task leadership (Bass, 1980). As Fiedler, 1971, states,

There is abundant evidence . . . that the dominating time and motivation dimensions, or similar features, are of overriding importance to most leadership situations. Their identification constitutes one of the most important achievements of leadership research (p. 72)

The behavioral approach, while it has been useful for providing descriptions of leader behavior and identifying factors common to leadership, remains largely unsatisfactory. This approach does not serve well in terms of clarifying the nature of leadership. If anything, it clouds the issue with its focus and lack of specific leader acts. It leaves not much better than the trait approach to the extent that few observations in leader

scenarios are valid models of leadership and how behaviors are found to consistently distinguish leaders from nonleaders. It is suggested here that the major failures of these approaches center on the lack of a clear conceptual or theory-related definition of leadership and the misdirected focus of attention on leader behavior instead of on the interaction taking place between leader and led.

Situational approach. Our evidence from the Lewin et al. (1939) style approach as well as from what this author has called a behavioral approach to leadership is the movement toward viewing the different contexts in which leadership occurs. This ultimately evolved into the situational approach to leadership. This approach took firm hold of the leadership area in the 1950s and continued to some extent into the present (Bass and Steidlmeier, 1999). Research from the earlier trait approach also led to this new tradition as more and more evidence pointed to the importance of situational demands in determining the qualities, characteristics, and skills required of a leader. Traits which were positively related to leadership in one situation were often unrelated, if not negatively related, to leadership in another situation (Fiedler, 1971; Fiedler & Chemers, 1974; Shaw, 1978). Thus, this new approach to the study of leadership began with a realization of the importance to leadership of situational variables. The main focus of this situational approach was the study of leaders in different settings where the

leadership was defined especially in terms of variations in group task and group structure (Bassinger & Julian, 1944, p. 397). Variations in setting also included such things as changes in group member characteristics, the situation itself, and possible influences. The intent was to find "unities of situations" within which the leadership role could be seen as relatively consistent (Gill, 1949). Situational factors were seen to influence not only the specific types of behavior leaders exhibited and how they were raised or reacted to, the types of qualities and skills required of a leader, the effectiveness of the leader, and the perceptions of leadership, but such factors were also found to be influential in the determination of the world views of leaders (Bassinger & Julian, 1944; Gill, 1949). This new approach to leadership was not so much directed at clarifying the nature of leadership as it was directed at the identification of those environmental factors which affected leadership (in the ways mentioned above). That is, this tradition began to take a multifactorial approach to the study of leadership.

One example of an attempt to take a multifactorial, situational approach to the study of leadership can be seen in Fiedler's Contingency Model of Leadership Effectiveness. Research attempts to support and specify this model are now and continue a healthy trend in leadership research today. This particular model has been developed in an attempt to explain and predict leader behavior.

SITUATION. Leader effectiveness, however measured. The model collates factors from both the trait and situational approaches as they interact together. The key personality measure is the LPC score which involves a description of one's least preferred coworker and which is related to a motivation or tendency toward a particular leadership style. The situation is important leader as it is defined as to favorable or unfavorable to either of the two personality types (high LPC scores and low LPC scores). This favorability-unfavorability dimension is determined in terms of three situational factors: (i) the nature of the interpersonal relationship between the leader and the group members, (ii) the task structure dimension, and (iii) the leader's position power (Follett, 1931; Fiedler & Chemers, 1934; House, 1971). Thus, this model of leadership effectiveness suggests that effectiveness (in terms of group performance) is contingent upon how the situational system of the leader, as measured by the LPC scale, and the situational favorableness (e.g., the degree to which the leader has control and influence in a particular situation).

The relationship between the LPC score and effectiveness as a group leader has been examined in numerous studies and the results from such investigations have indicated that the situation, as defined by the factors mentioned above is highly important. Fiedler (1972) finds for example that the willingness of group members to

As influenced by the leader is conditioned by leader characteristics, such that the quality and direction of this influence is contingent on the situational factors defined by group variables and task characteristics. However, given a specified situation, Fiedler and others have found consistent and significant correlations between the LPI score and type of leader behavior and group performance that purporting that LPI is an index of certain behavioral tendencies (Fiedler & Grouzet, 1974). Basically, the high LPI person has a basic goal to establish good relations first with the others in the group situation specified so that he has termed a relationship type of leader while the low LPI person's primary goal is accomplishing task accomplishment (parallel to a task leader). The low LPI leader is generally more effective in situations which are either highly favorable or unfavorable to the leader, whereas the high LPI leader is generally more effective in situations which are moderately favorable. As Bass (1978) concludes, although there remain some problems and unanswered questions, Fiedler's model does make a promising beginning toward the integration of leadership styles and situational factors as determinants of group effectiveness (p. 410).

In addition to the work of Fiedler, a great deal of other research has taken this situational or contingency approach in the study of leadership. From this body of research the following statements can be made

dependent effects of situational variables on leader behavior, leader effectiveness, and leader emergence within small group situations. Leadership performance on one type of task is positively correlated to leadership performance on another type of task (Follett & Owens, 1961), thus we cannot really speak of effective or ineffective leaders or leadership styles since effectiveness depends on the situation. In terms of leader emergence, the findings from this research approach "substantially supported the contention that who becomes a leader depends to some degree upon the nature of the task" (Hollander & Julian, 1968, p. 1091). Also, people who are most motivated and visible within the group situation are more likely to emerge as the leader (Follett & Owens, 1961). From a reading of research efforts (e.g., research on group structure, communication networks, etc.) we see that the increased visibility which often leads to leadership status may be effected in a variety of ways within the small group situation: holding a central position within a communication network, having a high participation level relative to other group members, having obviously high status which may include being labeled as an expert, having personal attributes which make the individual more visible than other group members, etc. (Bassett, Hargrave, Gross & Ellis, 1963; Follett & Owens, 1961; Gidycz & Lindbeck, 1978; Rickard, 1974).

"In summing up the implications of the situation in understanding leadership behavior, Gellert (1973) concluded that "Leadership is always relative to the situation" (p. 241) and Fiedler and Chatters (1976) conclude that most differences in the way people act are relatively minor when we consider how each of their behaviors is determined by social context (p. 241). "Our data suggest that leader behavior is more strongly determined by the situation than by what the individual would like to do or think he ought to do" (Fiedler & Chatters, 1974, p. 242).

Even though this approach was based upon the recognition that the behavior, effectiveness, and consequences of leaders were dependent upon the demands of the situation and that the definition of the situation included not only group structure and the nature of the task, but also included the characteristics, perceptions, and behaviors of the group members, "comparatively little attention was directed to the followers, especially in terms of the phenomenon of emergent leadership" (Hollander & Julian, 1978, p. 218). And even though leadership was beginning to be seen as an outcome of a relationship involving the leader, the led, and their shared situation, studies of leadership within this tradition paid little attention to the process aspects of leadership within the group situation. As Hollander and Julian have stated, "the situational view tends to suggest that the leader and the situation were quite separate" (1981, p. 214). The

total and substantiated approaches arrived at a similar manner
e.g., both tried to approach the study of leadership by
explaining "parts of a process which are by no means
separable" (Gallagher & Quinn, 1948, p. 181). This
system would add that the style and behavioral approaches
to the study of leadership have erred in a similar manner.

Interactional approach. The final approach to be
discussed here will be called the interactional approach
to leadership. It is not clear that there is a single,
primary basis in the area of leadership research today
since many of the traditions already discussed continue to
enjoy research attention. Additionally, there are other
approaches to the study of leadership in the current lit-
erature which have not been mentioned such as contingency-
theory into leadership training and an entire body of work
focusing on leadership effectiveness (or on effectiveness
of effectiveness, measures of, training for greater leader
effectiveness, etc.) Further, accompanying the dominance
in interest among behavioral scientists within the last
decade is well going research, there has been a new
emphasis emphasis in research on small group leadership
thus, although one cannot say that at present a leading
research trend exists in terms of an interactional ap-
proach to leadership, one certainly could say that much of
the promising research in leadership, coming from the
varied traditions mentioned, points to the importance of

not the meaning of taking a new, broader, interdisciplinary approach to the study of leadership.

An interdisciplinary approach, at least to this author, does not imply a single approach to leadership. There appears to be at least two interdisciplinary views-- the view is based on the assumption that leadership can best be studied by taking into account the contributions of those factors explored in the previous approaches (i.e., personality traits and attributes of leaders and other group members, group member behavior and leadership styles, and situational variables) as they all come to interact to affect leadership emergence, leader behavior, leader effectiveness, etc. That is, to study a particular aspect of leadership one would have to view all inputs in the small group situation (at least until a determination was made regarding which inputs were most important to specified aspects of leadership) as they all come and in concert. This approach may be seen as the logical extension of Fiedler-like approaches whereby instead of looking at the interplay of only two sets of variables, one must look at the interplay of several sets of variables and attempt to determine which combinations are most influential. This conclusion which more properly may be termed a systems or a multifactor approach to leadership. In essence then, interdiscipline here refers to a methodological or statistical interrelation among the variety of sets of relevant variables. Other commentators in the field have

view. An important aim of this leadership from this perspective and have in fact begun to do such research themselves (e.g., Bass & Biebuyck, 1969).

A second approach within an interactionist perspective of leadership, and one which shares many similarities with what Hollander (1958) has recently discussed as a transactional approach to leadership, involves a different epistemological focus as well as a new, or distorted, conception of leadership from those approaches previously discussed. Within this approach, in the attempt to study and understand various aspects of leadership (such as emergence, behavior, effectiveness, etc.) focus is directed on the interaction occurring among the group members. Leadership is seen as a type of relationship existing between people which is expressed by the type of interaction taking place. The goals of research coming from this perspective are: (1) to identify the type of interaction patterns that express a perceived leadership situation and (2) to delineate those aspects of the interaction which carry the most information in defining the nature of the leadership relationship (e.g., which aspects of the verbal and nonverbal interactions, communicative behaviors specify leadership relationships). A secondary line of research within this approach is to determine which (and in what manner) personal and situational variables affect interaction variables and thus indirectly affect leadership relationships.

It is this relationship approach which the present writer suggests as being the most useful approach to the study of leadership and which provides the principle for the present investigations. The value of this relationshipist approach lies in the most central point, that leadership is a relationship. Therefore, to study leadership one must view the behavior of all individuals (leader as well as follower) during the process of interaction. This approach places a new emphasis upon the relationships, the interactions, and follower's behavior within the groups all of which have been largely neglected in previous approaches to the study of leadership.

While a research tradition taking this approach is not yet well established by students of leadership, the idea of an interactionist approach to leadership is not at all new. As KING (1971) points out, one of the earliest explicit developments of leadership, done in 1840 by Thomas, viewed something of this perspective. Various studies throughout the leadership literature of the past, especially those using real-life situations, have also pointed out the interactive features of leadership. For example, GILL (1978) pointed out that leadership could not exist as the isolated individuals alone, but necessarily existed as well within the situation, beliefs and responses of the others toward the primary person (p. 101). In other words, leadership is defined within the interaction by taking into account follower perceptions and behavioral

response to the leader, rather than being defined simply in terms of the behaviors or attributes of the leader. Others who have taken this interactive perspective include such theorists as when one role is defined in part by the counterpart (Bass & Allen, 1994) and who by necessity must look at the role enactment of all group members vis-à-vis each other. Hollander's (1978) recently witnessed transactional approach similarly emphasizes the relational aspects of leadership. This view of leadership stresses the necessity of studying the transactional process existing among leaders and followers as they exchange influence and mutually influence one another. "Leadership must include the behaviors of followers" (p. 11). Without responsive followers there is no leadership because the concept of leadership is relational. Other contemporary authors (Brockhaus, 1990; Burns, 1978; House & Shamir, 1993; Hollander & Julian, 1994; Luthans, 1974) have also pointed to the usefulness of this approach and suggested it as a new perspective for leadership research. Hollander and Julian have pointed to the "greater sensitivity to the social processes of interaction and exchange" within recent leadership research and to the "enduring appeal of research toward a fuller analysis of leadership as a social influence process" (p. 201). They go on to say that "the tendency now is to attach far greater significance to the interrelationships between the leader, the followers, and the situation" (p. 191). They point out

that one consequence of this realization of fact is the realization that the problem of studying leadership and understanding leadership relationships is much more formidable than was earlier assumed (p. 388).

The arguments in favor of this approach are very few. The central argument suggests that this interactionist approach, of all other approaches mentioned, is best suited to the study of leadership because of the nature of leadership itself. A discussion of the interactionist approach entails a discussion of the conception of leadership.

Leadership is an influence relationship. Although it has been shown earlier that there is little apparent agreement regarding the nature or definition of leadership, certain trends in preference for specific definitions have been noted. Specifically, leadership has been defined in terms of (i) personality traits within the trait approach, (ii) as a set of behaviors engaged in by the leader (behaviors approach), and (iii) as a type of interaction existing among leaders and their subordinates (Follett, 1974), as a set of influence attempts (Gronley & Eisenberg, 1978), as a process of influencing group activities toward goal setting and goal achievement (Gronqvist, 1978), and as the exertion of positive (i.e., desired) by the leader's influence over the other group members (Bass, 1974). So many just a few definitions. If one looks closely, it is this third view, leadership as

diffusion) which appears continually throughout the variety of past leadership approaches.

In Carter's (1958) summary of the different definitions of leadership appearing in the literature up to that date, three of the five categories of definitions he distinguished were closely associated with an influence relationship view of leadership. Carter (1958, pp. 241-244) listed the following categories of leadership definitions: (i) The leader is the person who is the focus of group behaviors. The leader receives more communications, has greater influence upon the group's decisions, etc. (ii) The leader is the person who is able to lead the group toward its goals. (iii) The leader is defined as the person as named by the members of the group, based on declared or chosen. (iv) The leader is defined as the person who has the most demonstrable influence upon group activities. This refers to Deutsch's CIVIL theory: the leader is the person who causes systematic change, e.g., a change in the level of group performance, and finally (v) The leader is the person who engages in leadership behaviors. Category three above clearly reflects an operational, not a theoretical, view of leadership. This definition, as Carter points out, merely identifies the subject of the "leader" position and does not tell one anything about the characteristics of leadership. Further, who is chosen by group members as leader depends upon what question the researcher asks the group members: e.g., "who do you think

and is defined? Who would you wish to work with again? Who did you like the best? or Who started the most influence upon you? The essence of the question will depend upon the researcher's prior conception of leadership. Thus, this type of definition is only an operationalization of an earlier selected theoretical definition of leadership. Category five above essentially defines the behavioral view of leadership. It is important that, here and here, it is clear that the central concept is the resultant influence of the leader over the group. Leadership is either related to the leader's ability to make changes in group member behavior such that group decisions reflect the views of the leader, or the group moves in the direction of goal accomplishment or the level of group performance is altered due to the effect of the leader. While there may be difficulties, as earlier has suggested, with some aspects of each of the above definitions (e.g., the focus of group behavior may be a desired group member, not the leader; leaders don't always lead groups toward a group defined goal), the influence relationship aspect of leadership appears well accepted by many researchers in the area (Kierulff & Lander, 1984; Fiedler, 1981; Fiedler & Chemers, 1974; Katz, 1960; Shaw, 1978).

While leadership as influence has obviously been a part of the conceptions of leadership for some time Kierulff, 1988, stated that the leader was not who motivated in getting others to follow him; many researchers in the

leadership area have only recently begun to articulate or explain this view. Stubb (1949) concluded his review of the definitions given as leadership over the years with the following comment: "in general, it is an essential feature of the concept of leading that influence is exerted by one individual upon another" (p. 112). Tinschli and Whitehead (1975) note that "the definition of leadership in terms of influence or power is a relatively recent development" (p. 181). Macomber and Gillen (1949) wrote, "since the beginning of the 1940's there has been a disposition of interest in leadership toward processes such as power and authority relationships" (p. 149). Finally, Flinders and Gossard (1971) recently suggested that the two most important threads running through nearly all leadership definitions were: (1) that leadership is a relationship between people in which influence and power are narrowly distinguished and (2) that there can be no leader in isolation, that followers must either explicitly or implicitly consent to their part in this influence relationship. Thus, leadership implies some sort of exchange between leaders and followers (p. 4). "Above all, leadership is a relationship. More specifically, it is a relationship based on one person's power and influence over others" (Flinders, 1971, p. 11).

There is thus increasingly agreement that leadership is an influence relationship and this brings the discussion back to the question of the usefulness of the

Interactionist approach to the study of leadership. It is the only approach discussed which focuses on just this aspect of group behavior where influence relationships are visible: the group interaction, the communicative process existing between leader and led. Leadership can not be studied by looking at the leader alone (whether or he is in terms of leader traits, behavior or leadership style) nor the situation, if one expects to look at the behavior of the followers specifically in terms of their response to leader behavior. It is not at all surprising that other approaches have met with failure with regard to clarifying the nature of leadership. Within an interactionist perspective, one would not necessarily expect leaders to differ from non-leaders (by trait or behavior) or for leaders to behave consistently across different situations. Rather, what one would expect, given this view of leadership, is that the relationship between leader and led would remain essentially the same across situations. The response of non-leaders toward leader behavior would be different from the response of group members toward non-leader behavior (e.g., the relationships between leader and non-leader would be different from the relationships existing among non-leaders).

This interactionist approach is essentially the same as Milander's fifth transactional approach. Milander argues that this is the approach which leadership researchers should now be taking. Thus, well requested

Stogdill (1960) has suggested that a new approach should be taken in the study of leadership. FURTHER, failures of previous approaches suggest that NEW DIRECTIONS in the study of leadership must be taken. And, finally, the concept of leadership should acknowledge the choice of an approach which focuses on the group interaction as a whole because it is that interaction which defines the nature or existence of an individual or leadership relationship.

The final portion of this chapter will provide a brief survey of studies which have focused on administrative aspects of group behavior. First, with regard to studies of leadership in particular in small group situations, there do not appear to be many studies which have actually been done from the interactionist perspective, and none which have looked at the small group interaction in its entirety as the focus for statements about leadership. There are a few investigations which have pointed to specific aspects of follower behavior in either defining a leadership situation or in leadership emergence; such (1961) cites one study by Brown (1949) who reported the case of an engineer turned rail leader. Calling him self "the great I Am," he is said to have marshaled thousands of people into orderly workshops. Though it is apparent that the man was insane, instead of being labeled a madman he became a leader in large numbers of people. The essential difference between his being labeled a

leader, norman a leader, was in the activities and responses of the followers toward him. A more recent study similarly points to the role of the follower in terms of emergent leader behavior. Bales et al. (1975) found that leadership behavior was a joint function of situation factors, individual predispositions, and the followers' responsive behaviors. When subjects (primarily appointed by the researcher as the group task leader) were pushed to lead by the followers, they led. When they were pushed to follow, they increased behaviors associated with a nonconventional role. Other studies have found that positive and negative reinforcement of the leader's verbal behavior by other group members has the effect of either decreasing or increasing leader behavior (Brewster, Baskin, Chase & Kline, 1987; Fogarty, Baskin & Gervin, 1988). Studies which have focused on other aspects of leader and follower behavior include those which have looked at the relative rates of group member participation occurring over the course of the entire interaction. Time and again the emergence or perception of leadership is linked to the individual group member having the highest level of participation (Bassett & Montclair, 1979; Stamp, 1973; Stein, Stein & Stein, 1971). Burke (1974) has linked leadership not just to relative rates of participation but to the control of the communicative interaction in the group. Leaders were more active than followers in taking

the speaking floor and they were also given the floor more often than other group members.

Studies in which leadership was not the primary concern, but where attention was focused on the group interaction include the following: Bales' (1941) classic work of interaction process analysis provides a system for categorizing the behavior of all group members vis-à-vis one another, as they interact in a small group situation. This system certainly allows for categorization of leader behavior in leadership but also allows categorization of responses to leader behavior by other group members, thus defining relationships among group members. Baltes and Brounstein (1951) examined group interactions in terms of an elaboration of distinct phases occurring during group problem solving. Studies such as phases in group development have been done by Lewin and Shepard (1941). Both of these phase development analyses could be re-examined in terms of what they might have to offer regarding leader and follower roles in group decision making and in terms of leader emergence during group development.

From among communication researchers, research in terms of interaction analysis of communication patterns is quite recent and is rather sparse. The bulk of this research has occurred only within the last decade (Folmer, 1970). This relatively new approach called the programmatic perspective places emphasis on the ongoing behavioral processes of interaction which either construct or serve

to define the social situation (Fisher, 1976). In use of the two interactive studies of leadership, Hall (1954) has analyzed sequences of communication behaviors occurring between leader and led in small groups with either task-oriented leaders or relation-oriented leaders. Though not directly related to the study of leadership, communication researchers have developed a variety of category systems (content analysis schemes) for analyzing interactive behaviors, some of which might be seen as being related to leadership. Systems have been developed to look at processes involved in idea development (e.g., Schmidt & Crockett, 1974), decision making (e.g., Fisher, 1976), and conflict management (e.g., Ellis & Fisher, 1978). Category systems have also been developed which allow analysis of various types of relationships created or sustained through interpersonal or group communication. Much of this research (e.g., Rogers & Farina, 1973) focuses on communications which are related to an interaction's attempt to dominate by means of one-up communication patterns, attempt to be submissive by using one-down communications, or attempt to be equivalent by use of one-equals communication patterns.

Psychologists as well as communication researchers have recently begun to focus on the so-called aspects of interactions. With the exception of Stein's (1978) investigation which found that emergence and perception of leadership in small group sessions were measured along

both verbal and nonverbal channels. Few studies deal with leadership per se. Most of the studies which deal with nonverbal behavioral aspects of interaction deal with perceptions of dominance and status. These studies come largely out of the communication field and they try to come to be related to the concept of leadership insofar as they deal with behavior patterns which are indicative of influence relationships. Perceived dominance has been associated with interrupted and unreciprocated interruptions (Folger & Billers, 1977; Kenley, 1977), looking relaxed and arms akimbo body posture (Rubenstein, 1974), smoking another's pipe and pointing (Kenley, 1977). High power as group or interpersonal variable has been associated with being able to look down at the other members of the group or interaction. The lower power individual is presumed to have a greater need to realize the expressive behavior of the other (the high power individual) in order to gain information regarding the high power individual's intentions and so be able to adjust behavior. Looking also enables the low power person to indicate that she or he is attentive to the higher power person (Hallin, 1974). Finally, high power is also associated with having more personal behaviors or body postures noticed. Persons in agreement and persons of lower power will unconsciously mirror the behavior of those in power according to Kenley (1977).

Basic concepts and review of the leadership literature

ture in terms of the conceptions of and approaches to leadership. A brief review of literature covering the traits, style, behavioral, situational and interactionist approaches to the study of leadership has been provided, the value as well as the problems associated with each of the above approaches have also been discussed. At present it appears that the interactionist approach holds the most promise for future leadership research. The following sections will provide a brief summary and a more specific rationale than that provided in these sections for studies one and two.

Definition and statement of hypotheses

For Study 1 and 2

Study 1. The purpose of Study 1 was to determine to what extent observers of a small group interaction based their perceptions of group leadership on an artificial relationship and to provide an explicit description that perceptions of leadership rest more upon the presence of social influence relationships existing among group member interactions than the mere presentation of what has been previously described as "leader-like" behaviors on the part of one or more group members.

Theodore Newcomb, David Weiner & Weinstein, 1975; Bolander, 1977; Bass, 1975 in the case of leadership have recently come to suggest that leadership is properly conceptualized as a social influence relationship

among interacting individuals where the behavior of both leader and follower(s) must be taken into account instead as "leader" takes initiative attempts within the interaction and "followers" accept those attempts. Thus, the role of each is in part defined by the role of the other. In this sense, the role of leader (offering advice, making suggestions regarding such things as goal choice and objectives for goal accomplishment, offering suggestions for group structure, attempting to control group member behavior, etc.) is fulfilled when followers accept those roles as accepting or agreeing to those initiative attempts of the leader. This conception of leadership as influence is in contrast to earlier (though still prevalent) views that leadership could be defined or characterized by referring solely to the behavior of the leader (see Selin, 1931, 1936; Fiedler, 1951; and Humphreys, 1951). That is, according to this earlier conception, leaders are those individuals who engage in such spontaneous behavior as offering ideas and advice, making suggestions, interpreting and offering directions to group behavior, having a high degree of participation and visibility, etc., without regard to any other group member's behavior. In essence, this view is half correct. It does, as well it should, focus some attention on the behavior of leaders. Further, this conception of leadership has been most valuable in providing detailed descriptions of the variety of behaviors in which leaders engage. Valuable as it has been,

theory. It did not produce a clear, cross-situational view of leadership (Follett & Chermak, 1979). It has been played by generation of last effect last of "leader" behavior since the behavior of leaders can change markedly from one situation to another and from one leader to another. This position makes limited view of an incomplete conception of leadership. It looks at only part of the picture, one-half of the group interaction. The focus is misdirected at the behavior of one individual alone, the leader, where it should be placed on the interaction among leader and followers. Although systematic leader behaviors might be expected to change across situations, what does not change across situations is the relationship between group members. That is, the relationship between leader and followers, as defined by the acceptance of followers of leader influence attempts, does not change. Thus, leadership does not change across situations.

Although theoretically sound, the influence conception of leadership has received little empirical attention. One study which has looked influence and leadership is Bales's (1946) investigation. Bales spread groups of ten men each and assigned each group a variety of activities in sessions that for a series of three, three-hour sessions. Initially, groups were left unstructured or leader-less but they were allowed to select a leader for the second and third sessions. After each session general sociometric questions were asked of each group member including

and questions designed to discover each group member's judgment of the behavior influencing the group. Specifically, each member was asked the following question, "Does group act as closely knit unit the removal of any one person changes its composition. For which persons, if any, is this group, would this be the case?" (p. 110). The group member chosen most frequently was seen as being the most influential. Group members were also asked who they would judge to have been leaders in each of the last six sessions (members received no specific definition of leadership). In addition to these group member judgments, independent observers had been instructed to observe each session and code the behavior of each of the participants. We found that: (i) the participants' responses to the influence question identified the same individuals as those who were informally identified by the outside observers as leaders. The correlation obtained between these two lists was .89. (ii) Participant and observer judgments of leader also correlated .82. Thus, this is one study which succeeded in making an empirical link between leadership and influence. However, even this study may be considered weak to the extent that the question asked of the participants to determine the most 'influential' group member does not necessarily survey that a true intimate relationship existed among the participants. That is, selecting the individual group member 'whose removal from the group would most change the

conclusion of the group" does not provide anything but a very vague notion of influence. There do not appear to be any other studies in the leadership literature which specifically attempt to demonstrate that observers (or group members) rely on influence-relationship information in making their judgments of perceived group leadership.

The following propositions and hypotheses were offered for study one.

- P1: Leadership is an interactional or relational phenomenon.
- P2: The type of relationship is defined by the type of interaction occurring among group members.
- P3: The perception of leadership is dependent upon the observation of the behavior of both "leaders" and "followers" independently and separately, which are each called upon as an interaction.
- P4: Leadership is defined by the existence of a particular kind of interaction or relationship among group members; that being an influence relationship.
- P5: The perception of leadership is dependent upon the observation of "leader" behaviors directed at or in the presence of other individuals which have an observable, perceived causal (influential) effect on the behavior of the others (the "followers").

From the propositions stated above, the following hypotheses were derived.

- H1: Leadership within a group will be perceived when an influence relationship exists within the group.

Specifically, hypothesis one predicts that observers' perceptions of leadership will be strongly affected by the presence of an influence relationship within the group. When in theory will be a causal effect and amount of influence on the relationship between the behavioral and group leader's traits and the high levels of influence are associated with high leadership.

ratings and low levels of influence are associated with lower leadership ratings.

Hypothesis three states: Proposition: that both leader behavior and follower behavior are important dimensions in the perception of leadership. This is derived from the body of previous leadership literature (both theoretical and empirical) which has demonstrated the importance of the leader's behavior in and of itself for the perception of leadership in small group interactions. Thus, hypothesis two is proposed to take into account the role of leader aims for the perception of leadership.

- H2: The perception of leadership within a group varies with the perceptions of leader-like behaviors by all group and group members occurring within the group interaction.

Specifically, hypothesis 2 predicts that: those who will be a main source for amount of leader-like behavior on the individual ratings are the high rated leader-like behavior group, and those high levels of leader-like behaviors are associated with high leadership ratings and low levels of leader-like behaviors are associated with lower leadership ratings.

However, as a determination of the relative importance of influence versus leader-like behavior for the perception of leadership, clearly, it is the entire interaction among group members comprising the influence relationship between leader and the followers which forms the basis for leadership perception. Thus, hypothesis three states:

- H3: The perception of the influence type of interaction among group members is more highly associated with perception of leadership than the perception of leader-like behaviors by one or more group members within the group interaction. That is, while both influence and leader-like behavior

team-cohesiveness are associated with the concept of leadership, perceptions of leadership are more strongly associated with the presence of an influence relationship than the presence of leader-like behavior which has an indirect effect on either the interaction or on other group needed behavior.

Specifically, Hypothesis 2 predicts that, the amount of influence will affect leadership ratings, for a greater amount of the influence than the leader-like behavior will affect ratings.

As has already been stated, both amount of influence and amount of leader-like behavior affect the perception of leadership. A main effect for each has already been predicted (see Hypotheses one and two). Above and beyond these effects, it is expected that in combination, high levels of these two factors will produce an even stronger perception of leadership than any of the factors acting alone. Thus, Hypothesis four states that:

- 4a: There will be an interaction between amount of influence and amount of leader-like behavior on ratings of leadership for the designated leader such that the condition containing high influence and high leader-like behavior will produce higher leadership ratings than in any other condition.

Specifically, the suggested ordering of the mean for leadership ratings for the designated leader through factor three will be as follows: lowest mean for cell one (low INFLUENCE, low LEADER-LIKE behavior) followed by cell three (low influence, high leader-like behavior), cell two (high influence, low leader-like behavior), with cell four (high influence, high leader-like behavior) receiving the highest mean leadership ratings.

Each of the preceding tests of Hypotheses which examine the leadership ratings of group member three is determinants of effects due to level of influence and level of leader-like behavior is based on the assumption

that it is group member three (the designated leader) who is in fact chosen as group leader. Thus, Hypothesis Five is a test of that basic assumption.

- H1: The group member designated as leader (group member three) will receive significantly higher leadership ratings than each of the other two group members. This effect will be found for each of the trials in which there is a designated leader specifically, in trials two, three and four.

Specifically, Hypothesis Five predicts that a main effect for group member within trials will be obtained such that group member three receives higher leadership ratings than group members one and two in trials two, three, and four.

Study 2. The intention behind both studies one and two was to provide empirical support for the conception of leadership as an influence relationship existing among group members and expressed by group members' interactive behaviors. By definition, influence can only be examined within the context of a relationship or interaction among individuals. However, the elements of effectiveness and interactive behavior may be examined separately and this is what studies one and two purport to do. That is, study one emphasizes that leadership exists and will be perceived within the small group interaction when one individual has greater influence over the other group members. Leadership is defined primarily as an influence relationship existing among interacting individuals (although not all influence relationships constitute leadership). Study one attempts to provide empirical support for the proposition that leadership is properly conceptualized as an influence relationship.

Study I, on the other hand, takes influence as a given for the purposes of leadership, but attempts to examine more specifically the means by which influence, and hence leadership, is conveyed. The leader may attempt to elicit different types of behavior which have the result of eliciting or creating a change in a variety of follower behavior. In this sense, the influence-conveying behaviors are classified into "types" according to the communication channel along which they occur: verbal or nonverbal. Thus, the purpose of study I was to demonstrate that influence, and hence leadership, may be conveyed both verbally and nonverbally within the group interaction. Study I attempts to provide leadership researchers with more detailed information than they presently have regarding how the influence relationship is actually conveyed in the context of small group interactions. Specifically, this study deals with the following question: To what extent does each communication channel (verbal and nonverbal) convey influence relationships necessary for the performance of leadership?

The research direction taken in this study follows emerging developing trends in small group and leadership research. These trends include the increasing emphasis directed to interactive processes such as communication subfunctions (rather than interactive outcomes such as measures of group goal accomplishment and group satisfaction) and the increasing attention given to the

multichannel nature of human communication (that is focusing on verbal as well as nonverbal communication in the group interaction context). It is communication researchers for the most part in e.g., Barker, 1974; Gassner, 1975; Leifstam, 1978; Spillman et al., 1978) who are presently focusing attention on the complex, communicative process variables of small group interaction and emergent leadership. However, the classic work of Heifetz (1911) is one of earliest analyses schemes for interactions provided in the foundation for much of this research. An example of work in this area includes Hall's (1978) investigation in which communication sequences between leaders and followers were analyzed. Hall found a pattern within groups with relation-oriented leaders (put up affective sub-terms within groups with task-oriented leaders) such that leader's "human values" was followed by follower's "human values." While it does not appear that interaction process analysis of leadership has received much attention in the empirical work of social psychologists, such a focus of attention has been encouraged in recent theoretical reviews of the leadership area (e.g., Bjellander & Jönas, 1980).

Focusing attention on the interaction process as well as the multichannel nature of human communication, communication researchers and recently, social psychologists have demonstrated that people can and do communicate a variety of information along different channels. That

the information is conveyed by the various channels (the content of the content of what is said). Information is also carried by the nonverbal channel which includes vocalics (describing the type of voice, amount of speech, intonation patterns, speech volume and speech rate, interruptions, etc.). Vocalics includes all those features of the voice other than the words themselves) and kinesics (which includes facial expressions, the type and amount of eye contact, head nods and shakes, hand postural activity, body position orientation and shifts, etc.). Although the importance of verbal behavior is well recognized, this has not always been so with regard to nonverbal behavior, particularly in regard to certain sub-topic areas such as leadership within the context of a small group interaction. Researchers, especially in social psychology, have only just begun to analyze the ways in which nonverbal (especially vocalic and kinesic) channels convey information and the types of information such channels are capable of conveying. However, we do know that each of these channels is important in communicative behavior; people both send and receive messages as they hear you & mine, 1979; Wells, 1979). Some theorists have even argued that the majority of the information (e.g., over 40%) we send and receive is conveyed on the nonverbal channels, as opposed to the verbal-content channel (Burke-Harris, cited in Rupp, 1972, p. 11).

A few experiments within the area of leadership have begun to look at nonverbal behavior and in particular, how leadership is conveyed by the various channels. For example, Stebbins (1970) has demonstrated that subject-observers were able to accurately identify emergent leadership within a group when provided with the following types of information: (a) full channel information as provided by the presentation of audio-visual tapes of single group interactions, (b) verbal content and relative percent participation information provided by written transcripts of the group interactions, (c) kinesic channel information only as provided by the videotape (no-audio) condition, and (d) a reduced speech condition accompanied by the verbal channel which provided kinesic channel information in addition to some vocalic information, but no verbal content information, to the observer subjects. Stebbins concluded that his study provided the first direct evidence that nonverbal behaviors are useful in perceiving leaders. Although Stebbins did demonstrate that observers can make accurate (accuracy was defined in terms of agreement with the judgments or choices of leadership made by the actual group members) judgments of leadership based upon information conveyed along verbal and nonverbal channels, he does not demonstrate that it is in fact "leadership" that is being sent with either or given an evidence of an influence-relationship. The study does not demonstrate what it is that is conveyed along these two

However, his preliminary does not provide the means with information regarding what specific behaviors or variables in behavior are occurring along each channel and between "leaders" and "followers." "Leader," in Bales's study, is that person chosen as leader.

Study 2 provides a demonstration of the importance of both verbal and nonverbal channels for the perception of an influence-leadership relationship. In addition, it provides information regarding the specific nature of the behaviors being surveyed along both verbal and nonverbal channels.

The following propositions and hypotheses were offered for Study 1:

- P1: Leadership is an interactional or relational phenomenon (See P1 for Study 2).
- P2: Leadership is defined in part by the existence of a particular kind of interaction or relationship using group members, that having an influence relationship (See P2 for Study 2).
- P3: Leadership (the existence of an influence relationship) is surveyed along verbal as well as nonverbal communication channels within the small group interaction.

Following from these propositions, the following hypotheses were derived:

- H1: The group member designated as leader (group member three) will receive higher leadership ratings than either of the other two group members regardless of whether the observer subjects receive information along verbal, nonverbal, or a combination of verbal plus nonverbal channels.

Specifically, hypothesis one predicts that a main effect for group member within each experimental condition will be observed such that group member

three resources significantly higher leadership ratings than group members one and two.

This hypothesis follows from proposition three above that intimate relationships and team leadership, will be conveyed through both verbal and nonverbal communication channels within group interaction. The following hypothesis is proposed following the logic that the more intimate context, the stronger the perception of leadership.

- H4: A cognitive effect is hypothesized such that leadership ratings for the designated leader will be higher for conditions in which the intimate relationship is conveyed along two rather than one communicative channel.

Specifically, hypothesis two predicts that there will be a group effect for conditions on leadership ratings for the designated leader across groups. That is, that condition two in which, interaction is conveyed along both verbal and nonverbal channels through audio and visual means is expected to elicit higher ratings than any other condition. Condition three influenced is expected to elicit ratings as nonverbal means but not both. Group leaders there will receive significantly higher team leadership ratings in condition one than in conditions two, three or four.

CHAPTER 21

METHOD

Subjects

Subjects Subjects were 118 students enrolled in basic speech classes at Cleveland State University and basic psychology courses at Lake Carroll University. Participants in the experiment was on a weekly basis.

Experiment Upon arrival at an experimental lab, subjects were assigned in pairs, on a random basis, to experimental testing rooms. As they arrived in the experimental testing room each subject took a seat at a table. The rooms were divided by a curtain partition to reduce interaction and eye contact among the students. Subjects were then told that the experimenter was interested in their reactions to a videotaped small group interaction. Subjects were told that they would observe on a videotape TV monitor a small group interaction which had occurred among three fellow students. Following observations of the interaction, they were told that they would be asked to respond in a brief questionnaire regarding what they had just observed. Subjects then read and filled out informed consent forms.

Subjects were then requested to pay careful attention to the TV monitor and to the experimenter's instructions. They were also requested not to interact with each other in any way nor to make any verbal sounds inside the requests for clarification of instructions from the experimenter; so as not to interfere with the other subject's observation of the group interaction. Following these instructions, subjects were exposed to a no-sound videotaped still shot of group member number one and they were requested to fill out a series of scales by watching and reading (1974) designed to measure physical and text interaction. These scales were to be used as concrete measures. After each subject had filled out these scales the same procedure was employed for group members two and three respectively. Subjects were instructed to fill out the scales based on the still shot information in front of them and they were instructed to rate each individual independently without attempting to compare the group members to each other. Subjects were then told that they were about to observe an interaction which took place among the three students whose still shots they had just filled. They were requested to pay careful attention to the interaction and they were again reminded not to interact with each other in any way. At this time, subjects were exposed to one of four versions (comprising the four experimental conditions) of a videotaped interaction among group members one, two and three.

Following the experiment, the videotaped group interactions, if possible, were administered the post-experimental worksheet. Following completion of the post-experimental questionnaire, all participants were thanked for their participation and told that they would receive a booklet in their classes within ten to three weeks informing them of the purposes and results of the study. Following completion of data collection of the study, all students received a written explanation of the purposes, hypotheses and results of the study in which they participated.

Design: Subjects were randomly assigned to one of four experimental conditions ($n = 100$). In all four conditions subjects observed a videotaped interaction by means of a videotape recorder and television monitor. Within each of the four conditions, level of influence was manipulated as two levels (low and high) and amount of leader-like behavior was manipulated as two levels (low and high). This constituted a 2×2 factorial design. All four experimental conditions employed the same three actors as group members (Cleveland State University Student majors) and across each condition, roles and role assignment remained constant. Thus, actors one and two always played follower roles in all conditions. Actor three always played the leader in the three experimental conditions where a leader was designated.

holding actor and role assignment constant across conditions can provide problems in interpretation of results such that one is unsure whether obtained effects are due to the experimental manipulations (e.g., levels of influence or leader-like behavior) or the result of differences due to uncontrolled-for actor variables (e.g., actor traits being perceived as more or less leader-like than actors one and two) based on physical appearance characteristics. This problem may be mitigated in either of two ways. In terms of design, actors could be rotated through the roles such that each actor played each role (or played at least one other role) for each of the experimental conditions (then blocking across actors). This procedure was deemed impractical due to the time and effort involved in videotaping, the difficulty the actors had in learning their roles, and the number of subjects which would then be required. An alternative procedure involves deriving estimates for those possible effects due to uncontrolled-for actor variables (there should be primarily due to physical appearance alone nearly all behaviors were controlled for by the assignments) and subtracting out these effects from the effects due to experimental manipulations. This statistical solution is possible because due to actor differences was deemed most practical for the present investigation.

Thus, a 2 (low vs. high levels of influence) x 2 (low vs. high levels of leader-like behavior) factorial

design with two dependent measures of physical and task situation for each actor based on physical appearance. Also, we need to analyze for differences due to levels of influence and leader-like behavior. A summary of the design and conditions may be seen in Table 1.

Group Interaction and videotape monitoring. A three member group interaction in which members were attempting to offer solutions for the parking problem at Cleveland State University was used as the stimulus material for this study. This topic was chosen because it involved a problem with which nearly all college students were familiar (with Cleveland State students not doing. Several students had solutions to several student parking problems).

The verbal script for the small group interaction was initially constructed through the procedures described below. Two volunteer groups of three individuals each (who did not participate in the later experimental phase of the stimuli) were asked to participate in a small group interaction. They were asked to offer solutions for the parking problem at Cleveland State University. They were told that the experimenter was interested in the behavior of small group, problem-solving groups and that their entire interaction would be tape recorded. Both groups then discussed the parking problem and were tape recorded. After twenty to thirty minutes the experimenter stopped the discussion, turned off the tape recording and thanked

Table 1
Experimental Conditions for Study One

		Level of teacher-student behavior	
		low	high
Level of influence	low	condition 1	condition 3
	high	condition 2	condition 4

the group members for their participation. They were then told that their interaction would be used as the basis for scripts for actors who would be participating members in a small group interaction for a later study.

Each of the recorded small group interactions was then transcribed. These transcripts of workshop-interacting groups then provided the basis for a working script to be used for the creation of the scripts for each of the four experimental conditions. The working script for a three member group interaction was developed by selecting various verbatim passages (sometimes a single speaker utterance, sometimes a series of interchanges among two or more speakers) from the transcripts. Passages were selected for use when they offered reasonably clear suggestions for the solution of the parking problem or provided directions to the group. When suggestions were followed by active group discussion, then passages offered reasonably clear responses (either positive or negative) to suggestions made. In addition, words or whole speaking turns were inserted in order to produce a better flow of conversation. There were more than enough possible passages to select from the two, twenty-member groupings transcripts. Then a draft of the working script was prepared. It was read through and used, shortened or lengthened, until the resulting interaction lasted from six to eight minutes. A six to eight minute interaction seemed most appropriate for the experimental conditions

which is still long enough for a good deal of group interaction but would not be so long as to lose the attention of the subjects.

This method of developing a basic working script had the advantages of producing a more naturalistic group interaction than the experimenter, alone, could create. Natural verbal content was obtained by using the ideas and words which actual group members had used. Such a method produced more naturalistic phrases (e.g., the frequently nongrammatical, nonfluent speech) of subjects engaged in an informal speech situation.

It was from this basic working script that scripts for each of the four experimental conditions were developed. It was intended that scripts for each condition be as nearly identical as possible, within the constraints of the experimental manipulations, in terms of general content and overall length of the interaction. This intention was carried through.

In creating the script for each experimental condition, the verbal behavior of the interaction was dealt with first. Not all aspects of verbal content are necessarily related to leader behavior or to the establishment of an influence relationship among group members in a task oriented group. Those aspects of verbal content which were considered important (based upon findings from the behavioral approach to leadership) and which operationalized leader-like behavior included the following: (a)

comments which give suggestions or directions to others; (b) comments which give opinion, evaluation, analysis or which express feelings or a wish; and (c) comments which give orientation, information, confirmation or disconfirmation. Many of these have been listed by various leadership researchers as being leadership behavior (Bales, 1936; Barker et al., 1946; Cartwright & Lander, 1946; Redfern & Wiley, 1954; Morie & Dickson, 1949). Specifically, those are descriptions of behavior which Bales (1936) has determined is his interaction process analysis content analysis scheme as well group interaction, task oriented behaviors. Those comments listed above is g belong to Bales' category number four, those h belong to Bales' category five, and those i belong to Bales' category six. See Appendix A for a complete list of the Bales categories.

Those verbal content behaviors or interactions which are important to the establishment of an influence relationship are those which signify agreement with or compliance to the expressed suggestions, directions, analyses or feelings of another. Thus, verbal content behavior of an influence relationship was operationalized as those of a group member's use of Bales' category number three: "agrees, shows positive acceptance, understands, concurs or complies" in response to another member's suggestion, opinion, etc. As Bales (1936) has pointed out, low power individuals including followers,

generally, yet, more attention to and respect were lavishly
 to persons of high power, which includes leaders. In the
 sense of Sitaraman coded as Salas' category three of the
 presence of Sitaraman coded as belonging to Salas' category
 very low disagreement, about passive rejection, formally,
 withhold help as Salas' category twelve (about exchange
 value, reflects another's status, defends an incorrect value)
 by a group member in response to another group member's
 suggestion, opinion, etc., was indicative of a lack of an
 influence relationship between the group members. Thus,
 the system used to operationalize verbal content as being
 leader-like or indicative of an influence relationship was
 the content analysis system provided by Salas (1981).
 Specifically, Sitaraman coded as belonging to categories
 four, five, and six defined leader-like behavior and
 Sitaraman coded as belonging to categories three, ten and
 twelve defined the presence or the absence of an influence
 relationship. The level of leader-like behavior and the
 level of influence was dependent upon the number of situa-
 tions for each group member coded as belonging to these
 categories.

The Salas' content analysis system has a total of
 twelve categories of which only six were used systematically
 in the operationalization of factors in the present
 investigation. Categories seven, eight and nine all deal
 with asking questions (note information, ask for opinion,
 ask for suggestion or direction, etc.). In every

condition an attempt was made to equalize across all group members the number of attributions they each had which were coded as belonging to Baltes' categories seven, eight or nine. Thus, each group member, in each experimental condition, coded an approximately equal number of peers. This was done because it is not at all clear from the leadership literature who is the leader or followers, that make the best judgments. Leaders may demand answers from followers, but followers, respecting the ability of the leader. Frequently seek information, the guidance and opinion of their leaders. Baltes' categories one through six, namely, raises others' status, gives help or reward, has others follow actions, jokes, laughs, shows satisfaction and shows others tension, asks for help, withdraws out of social when not dealing with systematically in the present investigation.

Thus, operationalization by means of verbal content of level of leader-like behavior involved the number of attributions each group member had which were coded according to Baltes' interaction process analysis as belonging to categories four, five or six. Operationalization by means of verbal content of level of influence involved the number of attributions belonging to Baltes' category three and the lack of Baltes' categories ten and twelve which each group member removed from other group members following their diagnosis of a Baltes' four, five or six type.

Experimental group's leader-like behavior was operationalized along two dimensions: (a) level of participation and (b) attempts to interrupt the speech of another group member in order to gain control of the floor. Each of these dimensions has been linked to leadership. Thus and again, researchers have shown that leaders have higher rates of participation than non-leaders and that those individuals with high rates of participation are perceived as being leaders (Burton & Goldridge, 1975; Morris & Hoffman, 1978; Kierulff & Kierulff, 1978; Stang, 1974). Folger and Shanta (1974) have shown that less dominating or lower status individuals are less likely to interrupt or attempt to interrupt the speech of others who are more dominant or are of higher status. Tiedley (1977) points out that dominant individuals or those in positions of authority may show their dominance or authority by interrupting subordinates. In the present investigation, level of participation for each group member was operationally varied in terms of the number of speaking turns for each group member. A speaking turn has been defined by M. M. Bavelas as beginning when "one interlocutor starts alone talking and ends when a different interlocutor starts alone talking" (1975, p. 178). Level of participation was also operationalized in terms of the total number of words spoken by each group member. Attempts to interrupt the speech of another were operationalized as a period of solo speaking by one group member during which another group

rather long simultaneous speech which was not successful in gaining the conversational floor.

The successful vocalic operationalization of level of influence was in terms of the number of successful interruptions achieved. That is, an individual was identified, along the vocalic channel, when he was able to take control of the floor away from another group member by interrupting that group member's speaking turn. Masley (1971) has stated that "a hierarchy of power in a group could be plotted by indexing people according to the number of successful interruptions they achieve" (p. 88).

Successful vocalic channel behaviors were also dealt with in learning scripts for group member behavior for each experimental condition. Again, only those kinetic behaviors which have been previously linked to leadership were used. Leader-like kinetic behaviors in the present investigations included attempts by one group member to indicate who the next speaker should be by means of hand gestures. It has been described as part of leader behavior to attempt to control or structure the interaction of the group members. Deciding who shall speak when is one aspect of this type of behavior. According to Masley (1971) authority is shown in controlling others from a distance. A dominant person may direct others by gestures and "speak at them in a way that will shut them

up, stop other action, or evade attention and administration
 near? (p. 116) and proximity, direct them to work as
 well.

Kinesis behaviors which were indicative of an
 influence relationship included the following: (i) success
 at indicating the next speaker by means of gestures... that
 is, when the person pointed to or gestured toward was in
 fact the person who spoke next, the task indicating ges-
 ture was deemed influential or successful. (ii) Having a
 posture noticed by at least one other group member or (iii)
 having a body posture shift noticed by at least one other
 group member was also indicative of an influence relation-
 ship. Research has indicated that high status or powerful
 individuals are more likely to be noticed by lower status
 others in terms of both their physical activity and their
 body posture (Gumpson & Bates, 1971). The individual is
 influenced if this or he is successful in affecting some
 of the Kinesis behavior of the other group members. A
 final behavior indicative of an influence relationship in
 the present investigations was the receipt of a head nod
 following agreement for an extension of Kinet' appa Four,
 five or six. Thus, agreement may be said along the verbal
 channel channel as described earlier as along the sub-
 vided Kinesis channel. The presence of an influence
 relationship is also indicated by the lack of Kinesis head
 behavior that stated which show disagreement;

The fifth of seven summary of the verbal and non-verbal behaviors used to operationalize leader-like behavior for each of the experimental manipulations. See Table 1 for a summary of the verbal and nonverbal behaviors used to operationalize influence for each experimental condition.

The importance of each of these verbal and non-verbal behaviors in the creation of each experimental condition was not in the sheer number of each behavior occurring during the group interactions for any given individual, but in the number performed by each group member relative to the number performed by each other group member. That is, a low level of leader-like behavior was operationalized in terms of there being nearly equal numbers of leader-like behavior (verbal and non-verbal) performed by each of the three group members. A high level of leader-like behavior was operationalized in terms of one group member (always group member three, the designated leader) performing a greater number of leader-like behaviors (verbal and nonverbal) than either of the other two group members (who engaged in nearly equal numbers of those behaviors when compared to each other). A low level of influence was operationalized in terms of there being nearly equal levels of influence in terms of the affect any one group member's behavior had on any other group member's behavior among all three group members. Finally, a high level of influence was

Table 2

Summary of the Verbal and Nonverbal Behaviors
Used to Operationalize Leader-Like
Behavior Factor

Channel	Behavior
Verbal Content	<ol style="list-style-type: none"> 1. Number of utterances per group member which give suggestions, directions, definite certainty for others (Hales' category 3a). 2. Number of utterances per member which give opinion, evaluation, analysis, or express feeling as a wish (Hales' category 3b). 3. Number of utterances per group member which give information, information, reports, statistics or numbers (Hales' category 4a).
Nonverbal Vocal	<ol style="list-style-type: none"> 4. Number of speaking turns for each group member. 5. Number of words used the within nonverbal-like spoken by each group member. 6. Number of attempts by each group member to take the control of the flow away from another speaker and himself (an interruptive attempt).
Nonverbal Kinetic	<ol style="list-style-type: none"> 7. Number of attempts by each group member to influence the next speaker by means of a hand gesture.

Table 1

Summary of Verbal and Nonverbal Subtleties
Used in Operationalized Influence Test

Channel	Behavior
Verbal Content	<p>1. Number of verbal agreements (affirmations of agreement, positive responses, understanding, nonverbal, compliance) received by each group member following their own statement of a suggestion, opinion, etc. (e.g. receipt of a leader's statement from another group member for a leader's category four, five, or six statement)</p> <p>The lack of verbal disagreement (leader's category two and three) for an utterance coded as leader's four, five or six.</p>
Nonverbal Vocalic	<p>2. Number of successful attempts by each group member to interrupt, to take the control of the floor away from another speaker.</p>
Nonverbal Kinetic	<p>3. Number of successful attempts by each group member to indicate the next speaker by means of a head gesture.</p> <p>4. Number of body posture shifts by each group member which are noticed by one or more other group members.</p> <p>5. Number of hand gestures by each group member which are noticed by one or more other group members.</p> <p>6. Number of successful agreements (head nods) received by each group member from other group members following an utterance coded as leader's four, five, or six. The lack of a successful disagreement (head shake) for an utterance coded as a leader's four, five or six.</p>

constituted) in terms of one group member (always group member three, the designated leader) having more influence over the other two group members (members one and two) than either of them have over other group members.

Thus, scripts for each experimental condition were derived by taking passages from the working scripts, but making systematic alterations in the specific verbal or nonverbal behavior, or making changes with regard to which group member engaged in a specific verbal or nonverbal behavior such that the experimental conditions were created. Thus, condition one instantiated three levels of leader-like behavior and low levels of influence: one scripted each that group members one, two and three each engaged in nearly equal amounts of leader-like behavior and each had nearly equal influence over other group members. This condition then led to designated leader.

The interaction for condition two was scripted such that all group members engaged in nearly equal amounts of leader-like behavior. One level of leader-like behavior: all group members three had more (nearly two times more) influence over the other group members, through the scripted verbal and nonverbal behaviors, than group members one and two had (high levels of influence). The condition three instantiated (high levels of leader-like behavior, low levels of influence) was scripted such that group member three engaged in more (nearly two times more) leader-like behavior than did group members one and

was, however, all group members (not equally equal) in the influence they exerted over other group members. Finally, the instructions for condition four (high levels of influence and high levels of leader-like behavior) was scripted such that group member three exerted greater influence (exactly two times more) over other group members than either of them exerted and group member three also behaved in more (exactly two times more) leader-like behaviors than did members one and two. See Tables 4 through 7 for a summary of the amounts of leader-like and influence behaviors obtained for each group member for conditions one through four respectively.

Thus, in the creation of each script for the experimental conditions, the script was written and repeatedly edited until group members one, two and three each had the condition-appropriate leader-like behaviors and level of influence relative to each other (using both verbal and nonverbal channels). For reliability, a trained coder as well as the experimenter coded each turn of utterance for content (there was more than one utterance or thought within a turn) for each group member, for each condition, according to the Rales system. All instances of disagreement over the categorization of utterances or turns were resolved for the final script. Thus the script represented a high degree of agreement regarding Rales category assignments.

Table 4

Summary of Frequencies and Percentages for Behavior Indicators of Level of Individual Behavior and Level of Influence for Group Members Age 7, 8, and 9 for Condition One (Low Level of Individual Behavior, Low Levels of Influence)

Factor	Behavior	Group Member		
		1	2	3
Leader-like Behavior	Number of experiences coded as Times 4,5,6	26	23	12
	% of each group member's experiences coded as Times 4,5,6	62%	62%	40%
	Number of speaking turns	26	23	12
	% of speaking turns for each group member out of the total number of turns by all	58%	51%	30%
	Number of words spoken	422	437	458
	% of words spoken by each group member out of the total number of words spoken by all	51%	56%	50%
	Number of interruption attempts	3	4	4
	% of interruption attempts for each group member out of the total number of attempts made by all	33%	33%	33%
	Number of turn-indicating gestures	2	2	2
	% turn-indicating gestures for each group member out of the total number of turn-indicating gestures by all	33%	33%	33%

Table 4—continued.

Measure	Behavior	Group Number		
		1	2	3
Indices	Number of silent category 3 responses received in response to asking a false 4,5,4 sequence	2	4	8
	% of responses, index 3 received when asked 4,5,4 sequences were false	25%	34%	34%
	Number of successful interruptions	2	3	3
	% successful interruptions for each group coded out of the total number of interruptions attempted	40%	30%	10%
	Number of head nods, categorical received in response to asking a false 4,5,4 sequence	2	2	8
	% of responses, head nods received when asked 4,5,4 sequences were false	10%	22%	34%
	Number of head gestures missed	2	1	1
	% head gestures missed for each group member	—	—	—
	Number of body posture shifts missed	2	2	1
	% body posture shifts missed for each group member	100%	87%	100%
	Number of responses to interrupting word spoken soon by speaker	1	1	1
	% of responses for each individual, for interrupting word spoken soon by speaker	50%	50%	50%

TABLE 1

Summary of Frequencies and Percentages for Behaviors
 Indicative of Level of Leader-Like Behavior and
 Level of Influence for Group Members (SM,
 Van and Vane for Condition Two
 (Low Levels of Leader-Like Behavior,
 High Levels of Influence)

Factor	Behavior	Group Member		
		1	2	3
Leader-like behavior	Number of utterances coded as SM, 1, 2	24	16	28
	% of each group member's utterances coded as SM, 1, 2, 3	17%	41%	68%
	Number of speaking turns	28	21	18
	% of speaking turns for each group member out of the total number of turns by all	34%	32%	34%
	Number of words spoken	668	413	162
	% of words spoken by each group member out of the total number of words spoken by all	11%	56%	33%
	Number of interruption attempts	5	4	4
	% of interruption attempts for each group member out of the total number of at- tempts made by all	10%	37%	60%
	Number of turn initiating attempts	2	3	1
	% turn initiating attempts for each group member out of the total number of such attempts by all	10%	57%	33%

Table 3--continued.

Factor	Indicator	Group Number		
		1	2	3
Efficiency	Number of Rader's category 3 (approximate) responses to response to making a Rader 4,5,6 utterance	5	3	18
	% of approximate Rader 3 responses when Rader 4,5,6 utterances were made	11%	10%	58%
	Number of successful interruptions	2	2	3
	% successful interruptions for each group relative out of the total number of interruption attempts	40%	50%	41%
	Number of hand made (verbalized) responses to response to making a Rader 4,5,6 utterance	4	4	15
	% of approximate hand made responses when Rader 4,5,6 utterances were made	17%	27%	56%
	Number of hand gestures matched	2	0	2
	% hand gestures matched for each group member	—	—	—
	Number of body posture shifts matched	1	1	3
	% body posture shifts matched for each group member	50%	10%	100%
	Number of responses to indicating each speaker turn by gesture	1	1	3
	% of responses for each individual for indicating each speaker turn by gesture	10%	57%	67%

Table I

Summary of Frequencies and Percentages for Behaviors
Indicators of Level of Leader-Like Behavior and
Level of Influence for Group Members One,
Two and Three for Condition Three
(High Level of Leader-Like Behavior,
Low Levels of Influence)

Factor	Behavior	Group Member		
		1	2	3
Leader-Like Behavior	Number of utterances coded as Index 1,2,3	21	18	18
	% of each group member's utterances coded as Index 1,2,3	62%	41%	70%
	Number of speaking turns	24	20	28
	% of speaking turns for each group member out of the total number of turns by all	22%	24%	39%
	Number of words spoken	303	212	426
	% of words spoken by each group member out of the total number of words spoken by all	26%	25%	50%
	Number of interruption attempts	4	4	8
	% of interruption attempts for each group member out of the total number of attempts made by all	22%	22%	44%
	Number of turn indicating questions	4	4	3
	% turn indicating questions for each group member out of the total number of such questions by all	4%	26%	100%

TABLE 2--CONTINUED.

Factor	Definition	Group Number		
		1	2	3
Influence	Number of Sales' category 2 (representative) received in response to making a Sales 4,5,6 statement	18	8	4
	% of respondents (Sales 2) received when Sales 4,5,6 statements were made	40%	27%	17%
	Number of successful interruptions	2	3	4
	% successful interruptions for each group member out of the total number of interruptions attempted	52%	50%	50%
	Number of hand nods (representative) received in response to making a Sales 4,5,6 statement	4	3	4
	% of respondents (hand nods) received when Sales 4,5,6 statements were made	18%	34%	11%
	Number of hand gestures watched	3	3	4
	% hand gestures watched for each group member	--	--	--
	Number of body posture shifts watched	3	4	4
	% body posture shifts watched for each group member	120%	100%	100%
	Number of responses to indicating next number turn by gesture	2	3	3
	% of responses for each individual for indicating next number turn by gesture	25%	75%	25%

Table 1

Summary of Frequencies and Percentages for Behaviors
 Indicative of Level of Leader-Like Behavior and
 Level of Influence for Group Members One,
 Two and Three for Condition Four
 (High levels of leader-like behavior,
 high levels of influence)

Behavior	Behavior	Group Member		
		1	2	3
Leader-Like Behavior	Number of utterances coded as being 4,5,6	24	18	32
	% of each group member's utterances coded as being 4,5,6	44%	45%	70%
	Number of speaking turns	24	12	24
	% of speaking turns for each group member out of the total number of turns by all	44%	20%	37%
	Number of words spoken	334	274	483
	% of words spoken by each group member out of the total number of words spoken by all	47%	34%	49%
	Number of interruptions attempted	3	3	8
	% of interruption attempts for each group member out of the total number of interruptions made by all	25%	25%	41%
	Number of turn indicating gestures	8	3	2
	% turn indicating gestures for each group member out of the total number of such gestures by all	44%	21%	17%

Table 1--continued.

Factor	Subgroup	Group Number		
		1	2	3
Response	Number of Salin ¹ subgroup 3 (agreement) received in response to asking a Salin 4,5,6 utterance	5	4	28
	% of agreement (Salin 3) received when Salin 4,5,6 utterances were made	11%	10%	43%
	Number of successful interruptions	2	4	4
	% successful interruptions for each group member out of the total number of interruption attempts	40%	66%	75%
	Number of head nods (agreement) received in response to asking a Salin 4,5,6 utterance	6	1	13
	% of agreement (head nods) received when Salin 4,5,6 utterances were made	10%	3%	14%
	Number of head gestures elicited	0	0	4
	% head gestures elicited for each group member	--	--	--
	Number of body gestures elicited	0	0	4
	% body gestures elicited for each group member	0%	0%	100%
	Number of responses to interrupting first speaker turn by group	0	1	0
	% of responses for each individual for interrupting first speaker turn by utterance	0%	100%	75%

After the four scenes were completed, students actors from the Theater Department at Cleveland State University were recruited. Initially attempts were made to use male actors who resembled each other along several physical characteristics. However, the three actors who were finally used in production of the four interactions differed a great deal from each other in physical appearance. However, all three were experienced actors. The actors were given a script and a few weeks of rehearsal time in order to learn the scripted verbal and nonverbal behaviors. They were told to learn the interaction as well as scripted. Once the actors appeared to have an acceptable level of performance in rehearsal each interaction was videotaped in the campus television studio.

Technical aspects of videotape production such as camera position and angle, lighting and audio levels were held constant within and across recordings. Each interaction was filmed against a backdrop of parking and bookshelves. The three actors maintained the same starting positions across all conditions and they were arranged in chairs in a semi-circular fashion around a small round coffee table. Thus, all three were visible in nearly front-on positions. All actors dressed similarly in a casual manner and each actor wore the same clothing across all tapes.

Each interaction began with a male from black and one actor saying, "The problem is parking." For the first

thirty seconds of the interaction numbers were imposed on the tape to appear at the bottom of the television screen during identifying scenes as group members one, two and three. The interaction proceeded until its completion about seven minutes later. Approximately fifteen seconds before the end of the interaction, the numbers were imposed on the tape to reappear on the television screen, again identifying each actor by last number one, two or three. This was done to aid subjects in identifying each actor.

Imposed on the videotape immediately prior to the start of the group interaction was a series of three still shots, one of each actor (standing alone with a neutral expression), labeled by the appropriate number at the bottom of the screen. These shots were used for the covariate measures (judgments of task and physical orientation based on physical appearance).

There is four takes of each condition's interaction were videotaped. Following completion of taping, the experimenter carefully reviewed each take to determine which one best fit the original script. Interactions never conformed exactly to the script. Before Round Three began many difficulties in perform as previously to the experimenter requested and immediately some scripted behaviors were left out and others, non-scripted behaviors were included. In the process of selecting the best take for each experimental condition, a new, revised transcript was

action occurring that was actually used as opposed to the original plan of what was to be said and counts of all relevant behavior (firms, words, interruptions, non-verbs, body shifts, head nods and counts of silent pauses) for each actor were recorded. Tables 4, 5, 6, and 7 reflect the behaviors which actually occurred for each videotaped interaction (for conditions one, two, three and four, respectively) as opposed to what was originally scripted. On the whole, deviations from the original scripts were relatively minor.

At this point, each interaction was pre-tested to determine how natural of an interaction it appeared to be. Pre-test subjects ($n = 10$) were female speech and psychology students at Cleveland State University and Kent State University. Approximately fifteen students each watched one of the four conditions. They were given a three item scale (see Appendix A) measuring perceived naturalness of the interaction. The scale could range from a low of three (very unnatural) to a high of twenty-one (very natural). Mean ratings indicated each condition was perceived to be relatively natural (\bar{X} for condition one = 15.8; \bar{X} for condition two = 14.4; \bar{X} for condition three = 11.8, and \bar{X} for condition four = 14.4). Thus, these conditions fell within an acceptable range of naturalness for use in the present investigation.

Because of the rather large differences in physical appearance among the three actors, group members and

the experimental design of controlling the differences due to actor appearance in the design, a second pretest was performed. This was done in order to confirm that a separate analysis (overriding our effects due to differences in physical appearance of the actors from any effects due to the experimental factors) was necessary. Thus, another pool of pretest subjects ($N = 111$) who were basic speech and psychology students at Cleveland State University and John Carroll University were presented with a series of slides designed to measure each of the following: (1) the extent to which the actor was perceived to be credible based on his physical appearance, (2) the extent to which the actor was judged attractive on social, task and physical dimensions based on his physical appearance, and (3) the extent to which the actor was perceived as being leader-like again based on his physical appearance alone.

Four dimensions of source credibility (competence, character, competence, attractiveness, and availability) were measured by a series of seven-item, semantic differential type scales developed by McCreaney, Jensen, and Todorick (1971). The measures of task, social, and physical attraction used in the pretest were developed by McCreaney and McClell (1974). There was a series of twelve (four per dimension) Likert type, seven-item scales. Three items written by the experimenter measured perceived leadership. Two items were seven-item, Likert type scales and the third used a seven-item

semantic differential scale bounded by polite and impolite, the region of all previous scales for which approximate differences in Appendix C.

The following procedures for the pre-test were used. Subjects were shown a still shot of one of the three group members on a videotape television screen. While the picture remained on the screen, pre-test subjects were given the three scale questionnaire packet and instructed to respond to each item based on the information given them on the television screen.

A one way analysis of variance testing for differences due to actor appearance on each scale dimension was performed. Results indicated that differences between the actor-group members were significant on all dimensions of each of the three scales. (See Table 4 for a summary of the analysis of variance results. Thus, differences found in the pre-test analysis suggested that a covariate analysis would have to be performed to control for effects due to differences in the physical appearance of the actors.

Covariate Analysis: The covariate scales used in the present study were the task and physical activation scales developed by Moskowitz and Sutton (1974). These scales were the most theoretically relevant as covariates to the present study since differences in pre-test data were the result of physical appearance differences among the actors. The physical activation scale was directly measure reactions to physical appearance differences,

TABLE 9

ANOVA Summary for Differentiation Between Networks
Based on Physical/Approximate and
Task-based Factors

Factor	Dimension	Sum of Squares	df	F
Goal/Ability	reliability	109.24	3	10.19**
	character	64.89	3	3.59*
	anticipation time	166.21	3	8.19**
	response	169.21	3	8.19**
	response time	212.89	3	12.59**
Interaction	physical	479.23	3	14.79**
	task	179.21	3	8.99**
	social	177.89	3	8.49**
Leadership	from one	14.89	3	0.19*
	from two	45.89	3	12.49**
	from three	87.89	3	13.19**

*p < .05
**p < .01

The task assignment which immediately dealt with how an actor might be expected to behave in task situations, again based on physical appearance. The task dimension was relevant in this study since the group was a task oriented small group. These coverages were expected to equate effects due to differences in physical appearance among the actors in the assignment. See Appendix B for a copy of the complete measure.

Subjective reactions: A number of non-experimental measures were used to assess subjects' reactions to the videotaped group interaction. Subjects' reactions toward the group interaction in terms of their ratings of perceived group leadership were measured by a one item seven-item, Likert-type scale headed by the descriptive item: perceptions of leadership and leadership perceptions of leadership. Subjects were requested to rate each of the three group members on leadership on the three item-type scale.

Also included on the post-experimental package was a measure of how confident the subjects felt regarding each of the leadership ratings they had just made (e.g., how confident the subject felt about their leadership rating for group member one, member two and member three). Thus, following the leadership rating scale for each group member, a one item, four-item scale measuring confidence was attached. This Likert-type scale was headed by the descriptive item: how am I confident and very confident.

IN addition to items measuring perceived leadership and the confidence associated with the judgment of leadership, an item measuring perceived influence was included. This item required the subject to rate each group member as being of low or high influence he appeared to have on either of the other group members during the course of the intervention. Thus, three rating scales, one for each group member, following a Likert type format with a seven-interval scale was used. The scale was headed by perceived as influence and personally given amount of influence. As with the leadership rating scales, subjects were requested to indicate how confident they felt about each influence rating they made. Confidence was measured here in the same manner as described above.

Two other rating scales items were included in the questionnaire package. These were rating scales for sociability (by means of a five-interval, Likert type scale headed by the descriptions very little sociability and personally given amount of sociability) and for pleasantness (also by means of a five-interval, Likert type scale headed by the descriptions of not at all pleasant and very pleasant). These items were included to serve scales in which to assess the leadership and the fitness items.

Following the rating scales for leadership, confidence, sociability and pleasantness, subjects were requested to indicate the group member as

members in whom they had given the highest leadership rating. Subjects were then presented with a thirty-two item adjective check list and were requested to check the fifteen items which were most central to their leadership rating decisions for the individual most highly rated on leadership. Following this, subjects were instructed to rank order the five most important adjectives of those fifteen just checked. The purpose of these two measures was to determine whether subjects would select adjectives descriptive of individual traits, individual behaviors, or characteristics of the interaction as being the most important in their leadership judgments. These measures would also be used to determine whether different adjective descriptions were selected for different conditions.

The last page of the post-experimental packet contained a free response question asking the subject's opinion of the purposes of the study and a question asking the subject if they knew any of the three group members, and if so, in what way. Questions regarding the subject's sex, age, race, school of attendance, and whether they were native speakers of English were also asked. See Appendix II for a copy of the post-experimental packet.

Study Two

Subjects. Subjects were 114 students enrolled in basic speech and psychology courses at Cleveland State University and Case Western Reserve. Participation was on a credit given basis.

Procedure. The procedure for study two was nearly identical to that described for study one. Subjects were told that they would be exposed to a small group interaction and afterwards they would fill out a questionnaire concerning their reactions to that interaction. Subjects then read and filled out informed consent forms.

Subjects were then exposed to the computer stimuli and were requested to fill out the cognitive anxiety scale task and physical activation scales described in study one. This was the case for all subjects except those who were assigned to the knowledge-only condition. These subjects received no computer stimuli, since they would only be reading a transcript of the group interaction rather than viewing or hearing the interaction. The computer scales were filled out by these subjects as part of the post-experimental packet (imposed, then in the case questionnaires as all other subjects).

All subjects were then exposed to some form of the group interaction. Afterwards, subjects returned the post-experimental measures. Following completion of the post-experimental questionnaires participants were thanked for their participation and told that they would be informed of the purposes and results of the study at a later date. All subjects received a full explanation of the study at the completion of data collection.

Design. Subjects were randomly assigned to one of eight experimental conditions (2×2) comprising a 2

(low and high levels of influence) x 4 (mode of presentation: individual; visual-only; audio-only; audiovisual) factorial design. The interactions used in study two were conditions one (low levels of influence, low levels of leader-like behavior) and two (high levels of influence, low levels of leader-like behavior) used in study one. Each of these two conditions were presented to subjects in all channel modes as described above. A summary of the design and conditions may be seen in Table 1.

Mode of presentation-communication channels The data collected for audio-visual conditions (for both low and high levels of influence) in study two was that previously collected for study one (for conditions one and two of that study).

The visual-only mode of presentation was created by exposing subjects to the group interaction on a video-tape television screen with the audio portion turned off. The audio-only mode of presentation was created by tape recording each cassette tapes the two interactions for low and high levels of influence conditions one and two from study one. Presenting each group interaction on the cassette tapes were recordings of a segment of each group member's voice, identified as being the voice of either group member one, two or three, followed by a series of six more unidentified voice segments. These voice segments were used in the following way. First, subjects

Table 2

Experimental Conditions for Study Two

Level of Influence	Mode of Transmission (Communication Channel)		
	audio-visual	video-only	audio-only
low			
high			

responded to each of the three identified voice segments. In terms of the correlated recorded instances of physical and task performance. Second, subjects were then told that it would be important for them to be able to discriminate each of the three group member's voices and that before they would hear the actual group interaction they would be given another opportunity to hear and identify each of the three voices. The experimenter then played a segment of group member one's voice and requested, "this is student number one." It was then replayed and labeled again. The experimenter then continued this process of playing and labeling the segment of speech for group members two and three. Subjects were then given pieces of paper and told to listen carefully to each of the following six, unidentified voice segments. They were requested to write down on the paper, after each segment, whether they thought they had heard the voice of group member one, two or three. Six voice segments were then played and subjects made their choices. The experimenter then listed the correct group member numbers for each of the voices heard. Following this the experimenter re-played the original three voice segments again labeling each voice with the appropriate number. At this point, subjects were engaged in the actual group interaction after which they completed the post-experimental measures.

The experimental mode of presentation was designed by making a verbatim written transcript of the

verbal content of the low influence and high influence conditions (conditions one and two from study one). These transcripts collected what group member was speaking (members referring to the group member one, two or three were placed in the left-hand column preceding the start of each speaking turn), the exact content of what was said (paraphrasing appropriate for the meaning was included), but did not include transcriptions of the individual behavior of the group members. See Appendixes F and G for copies of these transcripts (for conditions one and two respectively).

Secondary and tertiary questions: These were identical to those used in study one.

CHAPTER 11

RESULTS

Tests of Hypotheses for Study 1

Factorial ANOVA produced a main effect for amount of influence on the leadership ratings for the designated group leader (group member shared) with that high levels of influence are associated with high leadership ratings and low levels of influence are associated with lower leadership ratings. A 2 (low vs. high levels of influence) x 2 (low vs. high levels of leader-like behavior) analysis of covariance for unequal N 's with two covariates (task orientation and physical attractiveness ratings for the three group members) was performed to test for a main effect of level of influence on leadership ratings. Summaries for the analysis of variance, analysis of covariance, and the adjusted means are provided in Tables 10 and 11. As predicted, a significant main effect for level of influence was obtained, $F(1, 124) = 8.81, p<.05$. An examination of the adjusted means reveals that high levels of influence result in higher leadership ratings for group member three than do low levels of influence. (M for low levels of influence = 3.18; M for high levels of influence = 3.81). Thus, hypothesis one is supported.

Table 16
ANOVA Summary for Leadership Ratings

Source	Sum of Squares	df	Mean Square	F
Indigenous	18.217	1	18.218	9.10*
Center-like Behavior	4.431	1	4.43	2.48
Influence & Leader-Like Behavior	9.248	1	9.25	5.19*
Physioid Attraction Correlate	8.245	1	8.25	4.15
Task Adaptation Correlate	1.838	1	1.84	1.12
Error	221.879	124	1.78	

ANOVA Summary for Leadership Ratings

Source	Sum of Squares	df	Mean Square	F
Indigenous	18.403	1	18.40	9.10*
Center-Like Behavior	4.811	1	4.81	2.71
Influence & Leader-Like Behavior	7.227	1	7.13	3.89*
Physioid Attraction Correlate	8.348	1	8.37	4.15
Task Adaptation Correlate	1.418	1	1.41	0.80
Error	221.879	124	1.78	

*p<.05

Table 11
Summary of Adjusted Means for
Leadership ratings

Effect	\bar{X}	\bar{S}
<u>Influence</u>		
Low Level	4.1	5.34
High Level	4.9	5.99
<u>Leader-Like Behavior</u>		
Low Level	4.1	5.45
High Level	4.9	5.84
<u>Influence x Leader-Like Behavior</u>		
	Low Level of Leader-Like Behavior	High Level of Leader-Like Behavior
Low Level of Influence	\bar{X} 4.88 \bar{S} 11	\bar{X} 5.79 \bar{S} 10
High Level of Influence	\bar{X} 5.89 \bar{S} 11	\bar{X} 5.88 \bar{S} 10

Hypothesis one predicted a main effect for amount of leader-like behavior on leadership ratings for the designated leader (group member thereof) such that high levels of leader-like behavior are associated with high leadership ratings and low levels of leader-like behavior are associated with lower leadership ratings. The analysis described above for the test of hypothesis one was used to test hypothesis two as well. The p value for the main effect was nonsignificant, $p(1, 110) = 2.71$. Thus, this hypothesis was not supported. Table 11 summarizes the analysis of variance and analysis of covariance and Table 12 summarizes the adjusted means for this test of main effect for leader-like behavior.

Hypothesis three predicted that the amount of influence main effect factor would account for a greater percentage of the variance than the leader-like behavior main effect factor. This hypothesis was tested by $\bar{\eta}^2$, a statistic used to estimate the magnitude of experimental effects (Winer, 1971, pp. 418-419). The results of this analysis indicated that the hypothesis was supported. The main effect of the influence factor accounted for 18 of the variance while the main effect of the leader-like behavior factor accounted for only 15 of the variance.

An interaction between amount of influence and amount of leader-like behavior was predicted by hypothesis four. This hypothesis was tested by means of a 2 x 2 analysis of covariance for amount. p Maximized shows in

the test for hypothesis two). The table is for summary of the analysis of variance and analysis of covariance and Table 14 for a summary of the adjusted means on leadership ratings for group members there. As predicted, the interaction between amount of inflation factor and amount of leader-like behavior factor was found to be significant, $F(2, 118) = 3.44$, $p < .01$. However, the order of the adjusted means deviated slightly from that predicted. The order predicted was: cell one, cell three, cell two and cell four (liking them in order from lowest rank to highest rank for leadership ratings on the designated leader). The order obtained was: three lowest to highest, one, cell two and cell four ($\bar{X} = 4.831$), cell three ($\bar{X} = 3.791$), cell four ($\bar{X} = 3.481$), and cell one ($\bar{X} = 3.37$). Note that all means are adjusted for the covariates.

Hypothesis three predicted that a main effect could be obtained for group members such that the designated leader (as designated in cells two, three and four) would receive significantly higher leadership ratings than either of the other two group members. One each of the appropriate cells a one way analysis of covariance with two covariates (task orientation and physical attractiveness ratings for group members) was performed. For all three cells a significant main effect due to group member was obtained on leadership ratings.

For cell two, $F(2, 18) = 28.81$, $p < .0001$. As inspection of the means adjusted for the covariates

indicated that group number three, as predicted, received the highest leadership ratings (\bar{X} for number three = 3.81; \bar{X} for number two = 3.56, and \bar{X} for number one = 3.42). A pre-planned \bar{t} test indicated differences between the means for number three and one were significant, $\bar{t}(14) = 3.43$, and differences between the means for number three and two were significant, $\bar{t}(14) = 7.44$, each at $p < .01$.

For cell three, $\bar{t}(12, 84) = 10.45$, $p < .001$. An analysis of the adjusted means reveals that it was again number three who received the highest leadership ratings (\bar{X} for number three = 3.75; \bar{X} for number two = 3.39; \bar{X} for number one = 3.29). The differences between the means for number three and one and for number three and two were each significant as determined by a pre-planned \bar{t} test. For the comparisons between number three and one, $\bar{t}(14) = 3.81$, $p < .01$, for the comparisons between number three and two, $\bar{t}(14) = 8.28$, $p < .001$.

Finally, for cell four, $\bar{t}(12, 84) = 12.78$, $p < .001$. Inspection of the means again reveals that group number three, as predicted, received the highest leadership ratings: \bar{X} for number three = 3.83; \bar{X} for number two = 3.49; and \bar{X} for number one = 3.34. The differences, as determined by a pre-planned \bar{t} test, between the adjusted means for group number three and one and three and two, were each significant, $\bar{t}(14) = 3.73$, and $\bar{t}(14) = 8.73$, $p < .01$, respectively. Thus, for each of the three cells in which a member was designated as leader either were insignificant.

than other group members, engaged in more leader-like behaviors than other group members, or was both more influenced and engaged in more leader-like behaviors than other group members, that person was in fact perceived by observers of the group interaction to show significantly more leadership than other group members. Thus, hypothesis three was supported. See Table 12 for a summary of the analysis of deviance performed for cells two, three and four and Table 13 for a summary of the adjusted means for leadership ratings for group members within these cells.

An unexpected significant main effect for group member was obtained in cell one in which no leader was designated, $F(2, 81) = 3.97$, $p < .05$. This analysis was not planned but was performed as a supplementary analysis at the time of the analysis for cells two, three and four described above. Inspection of the adjusted means reveals that group member one received the highest leadership rating (\bar{X} for member one = 4.09), followed by member three ($\bar{X} = 3.63$), with member two receiving the lowest leadership rating ($\bar{X} = 3.28$). A χ^2 test for differences between the means revealed significant differences between the adjusted means for group members one and two, $\chi^2(1) = 3.97$, and between group members three and two, $\chi^2(1) = 3.97$, $p < .05$. Tables 14 and 15 present summaries of the deviance analysis and the adjusted means for leadership ratings for group members within cell one.

Table 10

ANOVA Summary for Leadership Ratings for
Group Members within Cells 3, 4 and 5

Cell 3				
Source	Sum of Squares	df	Mean Square	F
Group Member	211.797	3	70.599	19.40***
Physical Attraction Covariate	0.287	1	0.287	0.08
Task Attributed Covariate	0.118	1	0.118	0.03
Total	212.198	34	6.241	

Cell 4				
Source	Sum of Squares	df	Mean Square	F
Group Member	217.048	3	72.349	20.47***
Physical Attraction Covariate	0.021	1	0.021	0.00
Task Attributed Covariate	0.124	1	0.124	0.03
Total	217.193	34	6.388	

Table 11—continued

Source	Cell 4			
	Sum of Squares	df	Mean Square	F
Group Means	129.717	3	43.24	21.24***
Physical Attraction Correlate	1.348	1	1.35	0.68
Task Attraction Correlate	0.110	1	0.11	0.10
Error	552.410	71	7.78	

***p < .001.

Table 1.1

Summary of Adjusted Means for Leadership Ratings
for Group Members Within Cells 1, 2 and 3

Person	1	2
Cell 1: high influence; low leader-like behavior		
Group Member		
1	10	8.43
2	10	8.88
3	10	8.82
Cell 2: low influence; high leader-like behavior		
Group Member		
1	10	6.77
2	10	6.83
3	10	6.79
Cell 3: high influence; high leader-like behavior		
Group Member		
1	10	8.84
2	10	8.88
3	10	8.84

Table 14

DEPTA Summary for Leadership Settings
for Group Members Within Galt 1

Source	Sum of Squares	df	Mean Square	F
Group Member	14.478	2	7.24	3.81*
Physical, Intellectual, Emotional	1.343	1	1.34	0.68
Each Administration Environment	0.002	1	0.00	0.01
Error	149.631	81	1.85	

*p < .05

Table 15

Summary of Adjusted Means for Leadership Ratings
for Group Members Within Cells 1

Factor	I	II
Cell 1, Low Affiliation Low Leader-Like Behavior		
Group Member		
1	33	4.78
2	33	4.89
3	33	4.81

Supplementary analyses for study 1: A Pearson

product moment correlation was used to determine the association between the leadership ratings for group member status and influence ratings for group member status covariates. The analysis revealed a significant correlation, $r = .09$, $p < .05$. Thus, a moderate relationship between leadership and influence ratings for the designated leader was obtained.

A 2 (high group low levels of influence) x 2 (high group, low levels of leader-like behavior) analysis of covariance for repeated measures with two covariates (analogy of group member task orientation and physical attractiveness) was performed in order to determine whether main effects (the level of influence and level of leader-like behavior) and an interaction effect for the two factors would be obtained on ratings of influence for the designated leader. The analysis revealed a significant main effect for level of influence, $F(1, 134) = 18.78$, $p < .05$ as well as a significant main effect for level of leader-like behavior, $F(1, 134) = 7.31$, $p < .05$. An inspection of the adjusted means for influence ratings indicates that high levels of influence are associated with higher influence ratings than are low levels of influence (i.e. for low levels of influence = 3.49; i.e. for high levels of influence = 4.14). Further, high levels of leader-like behavior are associated with higher influence ratings than are low levels of leader-like behavior (i.e. for low levels of leader-like

behavior = 1.84, \bar{X} for high levels of leader-like behavior = 4.85). The analysis also revealed a significant interaction effect for level of influence by level of leader-like behavior, $F(1, 124) = 3.88$, $p < .05$. Ordering of the adjusted means for influence ratings (from lowest to highest) is as follows: cell 1 ($\bar{X} = 4.84$), cell 2 ($\bar{X} = 5.84$), cell 3 ($\bar{X} = 4.84$), and cell 4 ($\bar{X} = 4.10$) (see Table 14 for a summary of the analysis of ratings and analysis of confidence and Table 17 for a summary of the adjusted means).

After watching the videotaped group interactions, each subject was required to assign a leadership rating to each of the three group members. Following each leadership rating, subjects were asked to rate how confident they felt about the preceding leadership rating. In an effort to determine whether there were different degrees of confidence associated with the factors of influence or leader-like behavior, a 2×2 analysis of confidence (as described above regarding the influence ratings) was performed. The analysis revealed significant main effects for level of influence, $F(1, 124) = 5.43$, $p < .05$, and for level of leader-like behavior, $F(1, 124) = 4.84$, $p < .05$. No significant interaction effect was obtained. Inspection of the adjusted means indicated that subjects were more confident of their leadership ratings when influence was high than when it was low (\bar{X} for low levels of influence = 4.27, \bar{X} for high levels of influence = 4.91) and

Table 15
ANOVA Summary for Influence Ratings

Source	Sum of Squares	df	Mean Square	F
Influence	18.468	1	18.47	18.09**
Leader-like behavior	9.483	1	9.48	9.39*
Influence & Leader-like Behavior	13.394	1	13.39	13.01**
Physical Attraction Correlates	8.887	1	8.89	8.71
Total Attraction Correlates	8.879	1	8.88	8.70
Error	188.766	114	1.66	

ANOVA Summary for Influence Ratings

SOURCE	Sum of Squares	df	Mean Square	F
Influence	14.188	1	14.19	13.79**
Leader-like behavior	11.888	1	11.89	11.59**
Influence & Leader-like Behavior	8.954	1	8.95	8.79*
High Level Attraction Correlates	8.887	1	8.89	8.71
Total Attraction Correlates	8.732	1	8.73	8.48
Error	188.766	114	1.66	

df = 115
F(1,115)
p < .05

Table 17
Summary of Adjusted Means for
Influence Rating

Effect	\bar{M}	\bar{F}
<u>Influence</u>		
low levels	88	8.80
high levels	85	8.21
<u>Leader-like behavior</u>		
low levels	88	8.80
high levels	85	8.85
<u>Influence x leader-like behavior</u>		
	Low levels of leader-like behavior	High levels of leader-like behavior
Low levels of influence	\bar{M} 4.88 \bar{N} 23	\bar{M} 5.97 \bar{N} 22
High levels of influence	\bar{M} 8.88 \bar{N} 23	\bar{M} 8.13 \bar{N} 22

when leader-like behavior was high ($\bar{X} = 4.92$) than when leader-like behavior was low ($\bar{X} = 4.17$). Refer to Tables 18 and 19 for summaries of the analysis of covariances and adjusted means for confidence ratings.

Subjects were asked to indicate (by means of checking and ranking procedures) which adjectives they felt best described the reasons behind their leadership rating choice. Subjects were given a list of thirty-two adjectives or descriptions for group member behavior or personality. Ratings for any given trait could have ranged from one to seven. However, in no cell did an adjective ever receive a higher mean rating than 3.48. Further, only three adjectives out of the thirty-two received mean ratings of at least 1.4 in at least one cell (these adjectives were: "is self-confident," "is dominating," "is aggressive"). Thus, subjects did not appear to be basing their leadership ratings within any given cell or across cells on the same factors. Only one adjective received a relatively high mean score in each of the four cells. That description given to the individual receiving the highest leadership rating was: "is self-confident." The mean ratings for this adjective in each of the cells is as follows, cell one, $\bar{X} = 2.86$; cell two, $\bar{X} = 3.14$; cell three, $\bar{X} = 3.48$, and cell four, $\bar{X} = 3.14$. Only two other adjective descriptions, having a mean rating of 1.3 or higher, were chosen by subjects for subjects' leadership ratings in more than one cell. These adjectives were:

Table 13

ACQRA Summary for Confidant's Behavior

Source	Sum of Squares	df	Mean Squares	F
Influence	5.173	1	5.17	5.48*
Leader-Like Behavior	4.478	1	4.48	4.76*
Influence & Leader-Like Behavior	0.484	1	0.48	0.51
Physical Attraction Covariate	5.529	1	5.53	5.86*
Task Interaction Covariate	0.422	1	0.42	0.45
Error	68.521	214	0.32	

ACQRA Summary for Confidant's Behavior

Source	Sum of Squares	df	Mean Squares	F
Influence	5.413	1	5.41	5.69*
Leader-Like Behavior	5.194	1	5.19	5.49**
Influence & Leader-Like Behavior	0.034	1	0.03	0.03
Physical Attraction Covariate	5.583	1	5.58	5.88*
Task Interaction Covariate	0.542	1	0.54	0.57*
Error	66.515	214	0.313	

$$*p < .05$$

$$**p < .01$$

Table 19
Summary of Adjusted Means for
Confidence Ratings

Effect	\bar{X}	\bar{S}_x
<u>Influence</u>		
low levels	4.5	4.17
high levels	4.5	4.49
<u>Leader-Like Behavior</u>		
low levels	4.5	4.17
high levels	4.5	4.31
<u>Influence x Leader-Like Behavior</u>		
	Low levels of Leader-Like Behavior	High levels of Leader-Like Behavior
Low levels of Influence	\bar{X} 3.98 \bar{S}_x .14	\bar{X} 4.17 \bar{S}_x .17
High levels of Influence	\bar{X} 4.58 \bar{S}_x .11	\bar{X} 4.49 \bar{S}_x .22

"is dominating" and "is aggressive," for each of these "dominating" received a mean rating of 3.42, an odd four that adjective received a mean rating of 3.75. For cell three, "aggressive" received a mean rating of 3.37, and for cell four, that adjective received a mean rating of 3.24. Thus, there is low consistency across subjects both within cells and across cells with regard to their reasons for rating their leadership ratings at least as far as this adjective check list measure indicates.

Subjects were asked to rate each group member on sociability as well as pleasantness rating scales. Ratings for both sociability and pleasantness were obtained only because it was deemed desirable methodologically to assess the dependent measure leadership rating subject and the other measures of interest (influence and confidence ratings) in other items. Thus, these ratings were of no interest in this study and consequently no analyses for either factor were performed.

Test of Hypotheses for Study 1

Hypothesis 1 predicted a main effect for group member within condition such that group member three would receive higher leadership ratings than group members one and two in each of the experimental conditions. Thus, the designated leader was expected to be identifiable by both verbal and nonverbal cues making clear to an combination to test this hypothesis, a one-way analysis of variance

was performed comparing leadership ratings for each of the three group members within each condition. Findings for each of the four conditions will be presented separately below. For condition 1 (audio-visual condition providing verbal content as well as nonverbal kinematic and vocalic information to the observer subjects) a significant F value was obtained for differences in leadership ratings among the three group members, $F(2, 90) = 19.29$, $p < .001$. Examination of the mean ratings that as predicted, group member three, the designated leader, received the highest leadership ratings (M for group member three = 4.08; M for group member two = 3.42; M for group member one = 3.01). Differences between the mean ratings for group members one and three and for two and three were each significant, $p < .01$, as determined by a postplanned t test, $t(30) = 5.54$, and $t(30) = 5.48$, respectively.

For condition 2 (visual-only, providing nonverbal kinematic information) a significant F value was obtained for differences in leadership ratings for group members, $F(2, 90) = 12.43$, $p < .001$. An examination of the mean for leadership ratings of each group member indicates that it was group member three, as predicted, who received the highest leadership ratings (M for group member three = 4.18; M for group member two = 3.56; M for group member one = 3.40). Differences between the mean ratings for group members one and three and two and three were each significant, $p < .01$, as determined by a t test, $t(30) =$

3.38 for differences between means for members one and three, $\bar{p}(13) = 2.34$ for differences between means for members two and three.

For condition three, the \bar{p} value was nonsignificant, $\bar{p}(12, 80) = 1.00$. Subjects were not able to significantly distinguish the designated leader (group member three) from the other two group members as indicated by their leadership ratings (\bar{X} for group member three = 4.39; \bar{X} for group member two = 4.39; and \bar{X} for group member one = 4.36) for this radio-only condition (providing verbal contact plus unswitched vocal information).

Finally, for condition four (transcript, providing verbal contact information) a significant \bar{p} value was obtained for leadership ratings, $\bar{p}(12, 80) = 24.39$, $\bar{p}(13, 80) = 10.00$. Inspection of the means reveals that group member three (the designated leader) was, as predicted, given the highest leadership ratings (\bar{X} for group member three = 5.34; \bar{X} for group member two = 4.31; \bar{X} for group member one = 3.98). Differences, as determined by a pre-planned \bar{p} test between the mean leadership ratings for group members one and three and two and three were each significant, $\bar{p}(12, 80) = 4.39$, $\bar{p}(13, 80) = 1.45$ for differences between one and three and two and three respectively.

Thus, in summary, hypothesis one was not only partially supported. The hypothesis was supported for conditions one, two and four-- The designated group leader

ranked significantly higher leadership ratings than group members one and two when channels were given audio-visual (both information along both verbal and nonverbal channels) information in condition one; when they were given visual information only in condition two (audiovisual-limited), and when they were given manuscript information only (verbal channel) in condition four. The hypothesis was not supported for condition three where subjects were given audio-only (verbal channel plus nonverbal visual) information. See Table 14 for a summary of the analysis of variance for each condition and see Table 15 for a summary of the mean leadership ratings for group members for each condition.

Hypothesis 2 predicted a main effect for channel-condition on leadership ratings for group member three (the designated leader) specifically predicting that leadership ratings would be higher in condition 1 (audio-visual) than in condition 2 (visual only), condition 3 (audio only), or condition 4 (manuscript only). To test this hypothesis, a 2 (low vs. high levels of influence) x 4 (audio-visual vs. visual-only vs. audio-only vs. manuscript-only channels of communication) analysis of variance for repeated 2 on leadership ratings for group member three was performed. The F value for a main effect due to channel-condition was non-significant, $F(3, 244) = 0.44$. See Table 14 for a summary of the analysis of variance and

TABLE 20

ANCOV Summary for Leadership Ratings
for Group Members within Conditions

Condition 1 Audio-Visual				
Source	Sum of Squares	df	Mean Squares	F
Group Member	122.2404	2	61.12	29.24***
Error	181.418	94	1.93	

Condition 2 Visual Only				
Source	Sum of Squares	df	Mean Squares	F
Group Member	119.2612	2	59.63	29.47***
Error	279.7808	102	2.74	

Condition 3 Audio Only				
Source	Sum of Squares	df	Mean Squares	F
Group Member	5.2788	2	2.64	1.47
Error	245.6184	96	2.56	

Condition 4 Telephone Only				
Source	Sum of Squares	df	Mean Squares	F
Group Member	14.1818	2	7.09	29.24***
Error	242.1871	100	2.42	

***p < .001

Table 11

Agency of Means for Leadership Ratings
for Group Members for Each Condition

Factor	M	SE
Condition 1: Audio-Visual		
Group Member		
1	33	2.49
2	33	2.42
3	33	2.08
Condition 2: Visual Only		
Group Member		
1	32	2.54
2	32	2.36
3	32	2.37
Condition 3: Audio Only		
Group Member		
1	31	2.55
2	31	2.38
3	31	2.32
Condition 4: Tape-Script Only		
Group Member		
1	35	2.18
2	35	2.17
3	35	2.14

Table 11
ANOVA Summary for Leadership Beliefs
for Group Member Types

Source	Sum of Squares	df	Mean Squares	F
Channel-Condition	4.8183	3	1.61	0.09
Level of Influence	91.8664	1	91.86	18.87***
Channel x Level of Influence	59.8183	3	19.94	7.31***
Total	156.5433	856		

***p < .001

Table 11 for a summary of the means for leadership ratings for group member three for this factor.

A significant main effect for level of influence on leadership ratings for group member three was obtained, $F(1, 294) = 11.47$, $p < .001$. Examination of the means indicates that high levels of influence ($M = 5.41$) led to higher leadership ratings than low levels of influence ($M = 4.90$). See Table 12 for a summary of the analysis of variance and Table 11 for a summary of the means for leadership ratings for this factor.

Additionally, this analysis of variance produced a significant F value on leadership ratings for a level of influence by channel-conditions interaction effect, $F(1, 294) = 3.71$, $p < .05$. See Table 11 for a summary of the analysis of variance. Level of influence interacted with channel-conditions such that the highest leadership means were received for high levels of influence in the audio-visual and visual-only conditions and the lowest leadership ratings were obtained for the low levels of influence in the audio-visual and visual-only channel-conditions. No subjects were more likely to perceive leadership when influence level was high in the audio-visual and visual-only conditions. See Figure 1 for a visual presentation of the interaction and Table 11 for a summary of the means for the leadership ratings.

Table 21
Summary of Means for Leadership Behavior
for Group Member Three

Factor	1	2		
<u>Level of Influence</u>				
low	103	8.88		
high	103	8.13		
<u>Channel-Condition</u>				
1 audio-visual	85	8.88		
2 visual-only	84	8.18		
3 audio-only	87	8.18		
4 transcript-only	84	8.24		
<u>Level of Influence & Channel-Condition</u>				
Level of Influence	Channel-Condition			
	1	2	3	4
low	\bar{X} 8.68	\bar{X} 8.33	\bar{X} 8.28	\bar{X} 8.13
	\bar{S} .28	\bar{S} .33	\bar{S} .28	\bar{S} .21
high	\bar{X} 8.68	\bar{X} 8.13	\bar{X} 8.83	\bar{X} 8.13
	\bar{S} .33	\bar{S} .33	\bar{S} .28	\bar{S} .33

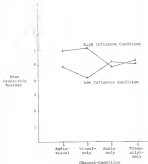


Figure 1
 Interaction of Inflation and Channel
 for Leadership Ratings

Supplementary Analysis for Study 2. A Pearson

product moment correlation was used to determine the extent to which leadership ratings for group member three and influence ratings for group member three covaried. The analysis revealed a significant correlation, $r = .74$, $p < .01$. Thus, a moderately high relationship between designated leader leadership ratings and influence ratings across all channel-conditions was obtained.

A 2 (low vs. high levels of influence) \times 4 (audio-visual vs. visual-only vs. audio-only vs. transcript-only channel-conditions) analysis of variance for repeated \bar{X} was performed in order to determine whether a main effect for channel-condition on influence ratings for the designated leader was obtained. Similar to the results obtained in the test of hypothesis two on leadership ratings, a non-significant effect for channel-condition was obtained for influence ratings, $F(3, 156) = .43$. A significant main effect for level of influence was obtained, $F(1, 156) = 18.50$, $p < .001$, and a significant interaction between level of influence and channel-condition was also obtained $F(3, 156) = 7.45$, $p < .001$. For the level of influence main effect, examination of the means for influence ratings indicates that the designated leader received higher influence ratings when level of influence was high ($\bar{X} = 7.67$) than when level of influence was low ($\bar{X} = 4.77$) with regard to the interaction effect due to level of influence and channel-condition, the highest influence

ratings were associated with high (medium) influence and channel-conditions one and two (audio-visual and visual-audio) and the lowest levels of confidence ratings were associated with low levels of influence and channel-conditions one and two. Thus, the perception of influence was dependent upon both the level of influence as well as the channel along which that influence was conveyed. See Table 14 for a summary of the analysis of variance for influence ratings and Table 15 for a summary of the for confidence ratings score. Figure 2 provides a visual presentation of the interaction effect just described.

Finally, the same analysis as that described above was performed in order to see whether significant main effects for channel-conditions and level of influence and an interaction effect for channel by level of influence could be obtained for the subjects' ratings of how confident they felt about their leadership ratings for group number three. The primary concern here was whether channels differentially affected subjects' confidence for their leadership ratings. The F values for both main effects and the interaction were all nonsignificant. Those ratings collected subjects was uniformly confident across all levels of influence and across all channel-conditions. See Table 14 for a summary of the analysis of variance and Table 17 for a summary of the means for confidence ratings.

Table 24
ANCOV Summary for Influence Analysis
for Group Number Three

Source	Sum of Squares	df	Mean Square	F
Channel-Confusion	4.4019	3	1.47	10
Level of Influence	16.4092	1	16.41	18.10***
Channel x Level of Influence	43.4019	3	14.47	16.07***
Error	493.2158	216	2.28	

***p < .001.

Table 81
Summary of Means for Influence Ratings
for Group Number Three

Factor	1	2		
<u>Level of Influence</u>				
low	120	4.87		
high	121	5.87		
<u>Channel-Condition</u>				
1 radio-visual	88	5.48		
2 visual-only	48	5.24		
3 radio-only	47	5.53		
4 transcript-only	49	5.41		
<u>Level of Influence x Channel-Condition</u>				
Level of Influence	Channel-Condition			
	1	2	3	4
low	\bar{X} 4.44	\bar{X} 4.44	\bar{X} 5.18	\bar{X} 5.41
	\bar{N} 18	\bar{N} 24	\bar{N} 30	\bar{N} 31
high	\bar{X} 5.15	\bar{X} 5.27	\bar{X} 5.09	\bar{X} 5.18
	\bar{N} 34	\bar{N} 33	\bar{N} 33	\bar{N} 33

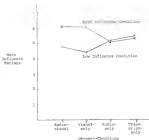


Figure 1
Interactions of Influence and Channel
for Influence Ratings

Table 19
 ANOVA Summary and Confidence Ratios

Source	Sum of Squares	df	Mean Squares	F
Channel	1.4101	2	0.705	6.87
Level of Influence	0.0428	1	0.0428	0.42
Channel x Level of Influence	0.4287	2	0.2143	2.09
Error	216.1631	216	0.999	

Table 20
Summary of Means for Confidence Ratings

Factor	\bar{X}	\bar{S}		
<u>Level of Inflation</u>				
low	1.33	4.46		
high	1.31	4.13		
<u>Channel-Condition</u>				
1 uniformly	45	4.15		
2 sinusoidal	46	4.13		
3 uniformly	47	4.06		
4 sinusoidal	46	3.87		
<u>Level of Inflation & Channel-Condition</u>				
Level of Inflation	Channel-Condition			
	1	2	3	4
low	\bar{X} 4.50 \bar{S} .33	\bar{X} 4.13 \bar{S} .34	\bar{X} 4.17 \bar{S} .36	\bar{X} 3.44 \bar{S} .31
	\bar{X} 4.50 \bar{S} .33	\bar{X} 4.00 \bar{S} .33	\bar{X} 3.33 \bar{S} .31	\bar{X} 4.07 \bar{S} .35

CHAPTER IV

DISCUSSION

Summary of Previous and Present Study

The results of the present study were supportive of the first hypothesis which predicted a main effect for amount of influence on leadership ratings for the designated group leader. As predicted, high levels of influence were associated with high leadership ratings and low levels of influence were associated with lower leadership ratings. Thus, subjects, who were placeholders of a social group interaction, were apparently able to utilize information regarding the presence or level of an influence relationship within the group interaction when assigning leadership ratings to group members. This provides support for the notion that leadership or, the perception of leadership by outside observers, is based at least in part on the existence of an influence relationship between the "leader" and "led" and that the degree or levels of influence are directly associated with the degree or level of leadership assigned to a group member.

Hypothesis two which predicted a main effect for amount of leader-like behavior on leadership ratings for the designated leader was not supported. Thus, the

Detached leader has high levels of such leader-like behaviors and attempts to control the speaking behavior of other group members, offers no substance suggestions, statements of opinion and information, and having a high rate of participation; subjects did not assign significantly higher leadership ratings when these levels of these behaviors (leader-like behaviors) were low. Thus, the presence of even relatively high levels by one group member vis-à-vis other group members of leader-like behaviors does not appear to increase the likelihood of receiving high leadership ratings over conditions where there were low levels of leader-like behaviors. The explanation for this lack of a significant difference due to level of leader-like behavior remains unclear. Previous research has linked the perception of leadership to the presence of leader-like behaviors (Graham, 1978; Meghillo, 1977), however this research has emphasized the importance, not of leader-like behaviors, but of the effect of those behaviors, specifically whether they are perceived to affect or change follower behavior. It is possible then, that varying levels of leader-like behavior without evidence of their having influence effects, may not be strongly associated with leadership perception. On the other hand, possible weak manipulations of levels of leader-like behavior or high levels of noise variation in the analysis may also have contributed for the weaker influence finding.

findings of the present study were supportive of hypothesis three which predicted that a greater percentage of the leadership rating variance could be accounted for by the level of influence factor than the level of leader-like behavior factor. However, the difference between the two was small (only 4%) and the total percent of the variance accounted for by each factor was also small (4% for the influence factor and 1% for the leader-like behavior factor). Because only a small amount of the variance was accounted for by these two factors and so much of the variance was due to error, the relationship between these two factors, in terms of which one accounts for a significantly larger percentage of the variance, remains unclear. Thus, although results were supportive of hypothesis three conclusions should remain tentative and this question should be subjected to further study.

With regard to the great amount of error variance found in this study, two primary, contributing factors may be suggested. There were several uncontrolled-for factors in this study limiting the use of a very wide variety of subjects. Subjects included males and females, blacks and whites, young adults as well as older adults, urban, state university students as well as private residential college students. Perhaps with greater subject restriction, the error variance would have been diminished. Further, although many of the group members' behaviors were carefully scripted and controlled "as, not all behaviors contributing

such things as facial expression, non-verbal or non-task-related gestures) were specifically scripted, counted or controlled for. It would be nearly impossible to control for all of the behavior that each of the three group members and still have a reasonably naturalistic group interaction, thus error due to these factors would be difficult to reduce to any significant extent.

Hypothesis Four predicted a significant interaction effect on leadership ratings for the designated leader between the influence factor and the leader-like behavior factor. Results of the present study were generally supportive of this hypothesis. A significant interaction effect was obtained but the ordering of the means was slightly different from the order predicted. The expectation of leadership taken in this study holds that leadership is primarily an influence relationship. Ratings of leadership for group member three should thus be obtained for both cells one and three where no such relationship exists. As expected, the cell which involved low levels of both influence and leader-like behavior received the lowest leadership ratings. No group member was experimentally designated as leader in this cell (cell 1). Also as expected, cell 3 (low levels of influence and high levels of leader-like behavior) received the next lowest leadership ratings. However, instead of the expected order of the means where cell 2 would have the third highest mean and cell 4 would receive the highest

mean, the wider standard was observed. Cell 2 in which level of influence was high, but leader-like behavior was low, resulted in the highest leadership ratings for the designated leader (even higher than that observed for cell 1 where both level of influence and leader-like behavior were high). It is unclear what this reversal in the ordering of the mean for leadership ratings means. It may be due entirely to chance factors. The difference between mean for cell two ($\bar{X} = 1.101$) and cell four ($\bar{X} = 1.107$) is nonsignificant. Tukey's HSD test for post hoc comparison of means (Hoth, 1980, p. 77) was performed. $H_1 - H_4 = .0061000 - .0061000$ and is thus nonsignificant. What the results do appear to clearly suggest is that it is the presence of an influence relationship which is most strongly associated with the perception of leadership in the sense that it is in those cells with high levels of influence where the highest leadership ratings for the designated leader were received.

A main effect for group context was predicted by hypothesis five such that the designated leader (group member three) would consistently receive highest leadership ratings than non-leaders one and two. This effect was predicted to occur in all cells in which a leader was designated (either by giving him more influence over his fellow group members, having him engage in more leader-like behaviors, or both). Results of the present study were supportive of this hypothesis. The individual

experimentally constructed as group leader was in fact given significantly higher leadership ratings than other group members. Thus, the manipulations were successful in creating a group leader in the perception of the observer-subjects.

However, a trivial, ungeneralized effect was also found to be significant. A significant main effect for group member was obtained in cell one where an one group member was either more influential than other members or engaged in more leader-like behavior than other members. The pattern of the mean leadership ratings for each group member reveals that it was group member one who received the highest leadership ratings, followed by member three and then two. The most likely explanation is that this effect was due primarily to chance or uncontrolled factors. All group members' behaviors were scripted to be nearly equal in influence and leader-like behavior and effects due to differences in physical appearance were controlled out. Further, the differences between the mean leadership ratings for members one and three was quite small (\bar{X} for member one = 4.38 and \bar{X} for member three was 4.10) and nonsignificant.

Overall, the results of the tests of hypotheses for study one support the maintenance of the present interpretation that the perception of leadership is based, at least in part, on the presence of an influence relationship among individuals. Further, the influence

...tendency to play a greater role in subject's judgments of leadership than the enactment of certain leader-like behaviors on the part of a lower and group member.

Mediary analyses revealed a number of additional findings. First, leadership ratings and influence ratings were found to be moderately correlated. Second, main effects for both level of influence and level of leader-like behavior were obtained on influence ratings for the designated leader such that ratings of influence were higher when influence was high rather than low and ratings of influence were high when there was a high level of leader-like behavior versus when levels were low for leader-like behavior. The main effect for level of influence was repeated. However, the main effect for level of leader-like behavior is difficult to interpret. One possible explanation is that subjects' perceptions of influence for a group member is related to the number of leader-like influence attempts which that group member makes regardless of whether the attempts are successful or not. Thus, while perceptions of influence may be based on an individual's attempts at influence, perceptions of leadership are based on an influence relationship, i.e., an individual is actually perceived to influence another.

A significant interaction effect between level of influence and level of leader-like behavior was also obtained on ratings of influence. Thus, ratings of

followers depended both upon influence as well as leader-like behavior manipulations, as did ratings of leadership.

Finally, subjects reported being more confident of their ratings of leadership for group leaders than in conditions where influence was high rather than low and where levels of leader-like behavior were high rather than low. Both main effects (low level of influence and level of leader-like behavior factors) were significant for confidence ratings.

The above results suggest a relationship between influence ratings and leadership ratings in the sense that essentially the same pattern emerges in terms of obtained main effects and interaction effects and in terms of the obtained moderate correlation between the two. Confidence ratings for leadership would be expected to be high in conditions where the leadership manipulations were strong, and this was indeed found to be the case.

Subjects were given the opportunity to indicate by means of an adjective check list and by making procedures those adjectives which best described their personal reasons for their leadership ratings. Specifically, they were asked to give the reasons behind their leadership rating for that group member to whom they gave the highest rating (the most power, for cells two, three and four, this was group member three). The subject was curious to see in what extent the subjects indicated that they perceived the experimental manipulations in g_1 would be reflected

choices vary across conditions reflecting the *ad hoc* nature of the task, and to determine to what extent subjects were consistent in their adjective choices. Overall, there was little consistency among subjects for the adjectives raised and checked and no patterns emerged across conditions. The three adjectives chosen most frequently indicated that subjects perceived the most leader-like group member to be well-motivated, dominating and aggressive. These are rather similar types of descriptions, and ones which are occasionally used to describe leaders, both leaders in particular. For the most part, they do not reflect a direct awareness on the part of the subjects, that the group leader was in fact influential or engaged in more leader-like behavior. The adjectives chosen are more descriptive of personality traits than behaviors and are somewhat more descriptive of an individual group member than behavior rather than being descriptive of a type of relationship or interaction between group members (e.g., subjects chose adjectives such as, aggressive, dominant, and self-confident to describe the leader. They did not choose descriptions such as, controls the speaking floor, is more influential, is agreed with the most, motivates the group's interaction, etc. to describe the leader-follower interaction). Thus, the presence of an influential relationship, and to some extent, the emergence of leader-like behaviors, strongly affected subject-observations

perceptions of leadership with verbal, visual, and
directly source of these particular findings.

Summary of Results for Study Two

The results of the present study were partially
supportive of the first hypothesis which predicted that
the designated leader would be best in mind as well
leadership receive the highest leadership ratings in
each experimental condition whether subjects were given
full multi-sensory information along both verbal-visual
and nonverbal visual and verbal channels, visual non-
verbal channels information only, verbal channel
give nonverbal channels information only, or through
nonverbal channels information only. For all conditions
except the auditory condition, group member rated the
designated leader, perceived significantly higher leader-
ship ratings than group members one and two. Leadership
can thus be conveyed through verbal as well as nonverbal
source as predicted and as found in previous, similar stu-
dies (Bass, 1954). The main effect due to group member
was nonsignificant in the audio-only condition. Several
explanations for this result are possible. One explana-
tion, of course, is that leadership is not conveyed well
through audio-only situations. However, this seems im-
probable. Previous research (Bass, 1954) has demon-
strated that leadership is conveyed extremely well
when subjects are given auditory information. Further,

which only identified correct leadership information along the channels simultaneously verbal content as well as nonverbal content. The verbal content alone condition (the transcript condition) was successful in identifying accurate leadership information. Thus, it does not take more than a channel-official verbal-content and nonverbal vocal information should fail to convey leadership. A more plausible explanation for this result lies in a methodological weakness of the study. Subjects had more difficulty distinguishing the voices of the three group members in previous trials and in remembering which voice belonged to which numbered group member at the time that they were required to make leadership ratings for group members. Perhaps a better methodology would have involved using more distinguishable voices or employed a system whereby a visual number (one, two or three, corresponding to each voice) appears on a TV monitor screen as each voice is played during the group interaction. This method would allow the subject to identify each voice by number as it occurs throughout the interaction and this should aid in both distinguishing and remembering the voices of the group members.

Overall, the results from the tests of hypothesis one suggest that an influence relationship, and hence leadership, is conveyed by both verbal and nonverbal means. However, because full support for the hypothesis was not obtained (e.g., for all conditions) conclusions should

control channel condition and the magnitude of the degree in which different verbal and/or nonverbal communication channels convey leadership should be subjected to further investigation.

Hypothesis two predicted a main effect for channel-condition on leadership ratings for the designated leader specifically. It was expected that leadership ratings would be higher in condition one (audio-visual) than in all other conditions since more influence is conveyed in more different ways here than in any other condition. That is, influence in condition one is conveyed through the verbal channel (by such means as: leader offers suggestions and followers verbally accept those suggestions), through the nonverbal-audible channel (e.g., leader attempts an interruption and succeeds), and through the nonverbal-visual channel (e.g., leader indicates by posture who is to speak next, and he is successful in adjusting the speaker, leader changes his body posture orientation and is then noticed by the followers). All of these behaviors, as in any multi-channel interaction, may occur separately or simultaneously. Thus, the expectation was that the more channels along which influence is conveyed, the stronger the perception of leadership. This hypothesis was not supported in the results (a main effect for channel-condition was not obtained). An examination of the mean reveals that there was little difference between mean leadership ratings for the designated leader across

channel. Further, the mean ratings were all moderately high. Thus, subjects were able to perceive (as indicated by their ratings of leadership for group member three) leadership occurring in all conditions; all conditions were successful in conveying leadership. Although these results did not support hypothesis two, they do conform to results of other studies in which channel competence have been made similar to other studies (e.g., Bales, 1975) have found that leadership is conveyed successfully across a variety of verbal and nonverbal channels. However, the explanations are offered here for the lack of the predicted meditative effect for amount of influence (one influence is conveyed by multiple communicative channels) on leadership ratings. Perhaps the sheer number of influence interactions occurring across multiple and verbal channels within a group is not as important to the perception of leadership as the fact that a minimum level of influence is perceived on at least one channel. That is, leaders are those who are perceived to have influence over other group members, however, having more influence does not make them even more leader-like. A second explanation deals with the fact that we do not know what subjects agreed to do multi-channel communication interactions (as opposed to the audio-visual channel in the present investigation). That is, just because the experimental manipulations offered subjects influence relationship impressions along verbal-nonverbal, nonverbal-visual and

converbal-vocalic channels, does not mean that subjects in fact attend to all of their information. Subjects may attend primarily to one channel (e.g., Vernein or verbal-content only) even in the audio-visual condition thus making it functionally equivalent to the other single-channel conditions (visual-only, verbal-only, bimodal-only). If subjects do tend to focus on a sub-set of communication behaviors rather than on the entire set of behaviors in multi-channel situations and they adopt their focus to whatever information is available to them in single-channel situations, then a single versus multi-channel comparison would not be expected to produce different levels of leadership ratings.

Results from the test for this hypothesis revealed a significant main effect for level of influence. Thus, regardless of the channel along which an unknown relationship was portrayed, higher leadership ratings were given to the designated leader when influence levels were high rather than low. A significant interaction effect was also obtained between levels of influence and channel-condition such that the highest leadership ratings were associated with high levels of influence for audio-visual and visual-only conditions and the lowest leadership ratings were associated with low levels of influence in these two channel-conditions. Thus, the audio-visual and visual-only channel-conditions appeared to best support the different levels of influence. Apparently the channel

along which information is conveyed is important when the type of information conveyed is taken into account. Differences between high and low levels of influence appear to be best conveyed in audio-visual and visual-only conditions than in the audio-only and transcript-only conditions.

Secondary results for study two, as in study one, support the view that leadership ratings and ratings of colleagues for the designated leader are related. A moderately high correlation was obtained between leadership and influence ratings. Further, influence ratings show the same pattern as leadership ratings with regard to a main effect for channel-conditions (no significant effect was obtained), a main effect due to level of influence (a significant effect was obtained), and the interaction effects between level of influence and channel-conditions. The interaction effects obtained for both leadership ratings and influence ratings were significant and the type and degree of interaction was nearly identical in each case. Finally, results indicate that subjects felt equally or nearly equally confident of their leadership ratings across all channel-conditions. Thus, at least as far as the subjects were concerned, they apparently felt that they had enough or adequate information provided them in each experimental condition on which to base their leadership ratings.

current results from both study one and two clearly support for an interactional conception of leadership and in particular, for the view of leadership as an influence relationship. These studies provide support for models of leadership suggested by this author as well as models proposed in current theoretical statements by leading leadership researchers and theorists. These studies offer support for the usefulness of the matrix used in both social psychological and communication research to focus on interactional or process variables and to examine the contribution of verbal as well as nonverbal communication channels.

Recommendations for Future Research

Several recommendations may be offered for future research and some of these are suggested by the limitations of the present investigations. Future studies should continue to investigate the importance of influence relationships to the conception and perception of leadership. Specifically, future investigations should look at a variety of different types of groups and situations, for example, groups which are more social in nature and goal than those which are problem-solving such groups as those assessed in the present studies. It would be preferable to examine influence in naturally interacting groups. A disadvantage of the present studies as depicting group member verbal and nonverbal behaviors is that it is

difficult to create completely naturally appearing, groups. The advantage, of course, is that one is aware of exactly what behaviors do occur in the group, but a methodology which uses presently available verbal and nonverbal coding schemes for coding the behavior of naturally interacting groups would provide exactly the same advantages. This methodology, combined with the type of methodology used by Davis (1970) in which naturally interacting groups observed their own leaders while subjects observed the group interaction and made their judgments of group leadership would be a good alternative to the present methodology. In addition to the study of influence and leadership in naturally interacting groups, future investigations should focus on naturally occurring groups (as opposed to laboratory created groups) of all kinds from family settings to business settings, and dealing with long-term groups as well as short-term groups. Certainly one limitation of these studies which supports future lines of research, is that the composition of the group consisted of all males. Future research should examine influence and leadership among female as well as mixed-sex groups.

Other methodological limitations of the research studies suggest other concerns for future research. In any methodology that involves communicative channel comparisons, care must be taken that subjects are given enough information along each channel in order to make meaningful judgments (e.g., judgments of leadership). For

example, the auditory condition in the present study provided verbal feedback and visible influence cues which were necessary for the perception of leadership. However, other important cues which could have enabled subjects to distinguish between valence and remember who-said-what may have been eliminated as well. Also subjects may have been unable to make meaningful leadership judgments for each of the three group members. An alternative methodology from that used in study two was suggested earlier in this chapter and would be employed in future investigations. Finally, it is useful to discuss methodological effects associated with several cues of various kinds from verbal contact. The present investigation did not exclude verbal contact from several cues in that any effects due to visible-cue information on leadership would be masked. However, caution should be exercised in these channel comparisons to separate the channels in such a way that one does not stray too far from what constituted natural human interaction since that is precisely what we are attempting to study. Use of voice symbolism and use of voice filters (as used in Davis's 1978 study) may produce highly artificial effects.

Above and beyond the limitations of the present investigations, there are lines of research which should be pursued which this model of leadership suggests. Further investigations of the relationship of influence relationships to the acceptance and perception of

Leadership should be viewed as: (a) functional versus non-functional; (b) task-oriented versus relation-oriented; (c) directive versus non-directive associated with different types of interaction? What would be the critical parameters of influence relationships? Which of the following would be most important to the perception of influence and leadership: the frequency of influence interactions occurring within the group, the duration of these influence periods, whether influence takes place during certain critical periods of group development, or over what aspects of group behavior influence is exercised (e.g., influence over group goal choice, influence over group structure, influence over group task allocation, etc.)? What personal and situational variables affect the nature and strength of the influence relationship?

Interactive approaches to leadership should be pursued. The question regarding the relative importance of influence relationships versus leader-like behavior to the perception of leadership should be subjected to further research. With regard to investigation of the multichannel communication of leadership, further research should be pursued to determine the extent to which verbal and nonverbal channels convey influence relationships and leadership. Each of the following questions need further investigation: which channels do individuals focus upon and which channels do observers of group interactions

Does not "examine the nature of the relationship among group members?" Within multichannel interactions we must determine whether individuals attend to all incoming information. If they focus on only one aspect of the incoming information, what aspect is chosen and what determines that choice? Finally, do all communication channels convey all types of information? That is, the present investigation obtained information effects which suggest that channel comparisons studies must also take into account the nature of the type of information conveyed.

In summary, future lines of research should continue to investigate the relationship of influence to the conception and perception of leadership in small groups in an effort to build a more solid and stable formal-informal model of leadership. Such research by necessity should focus on the interactional or process aspects of group interaction, taking into account the verbal and nonverbal components of that interaction process.

ANNEXURE 1

WALLS CONTENT ANALYSIS GUIDELINES

Categories

- 1 Shows solidarity, states other's status, gives help, assists.
- 2 Shows hostile attitude, jokes, laughs, shows satisfaction.
- 3 Agrees, shows passive compliance, orders stands, agrees, complies.
- 4 Gives suggestion, direction, explains other way for action.
- 5 Gives opinion, evaluation, assigns appropriate feeling, asks.
- 6 Gives information, information requests, clarifies, confirms.
- 7 Asks for suggestions, information, repetition, confirmation.
- 8 Asks for opinion, evaluation, assigns, representation of feeling.
- 9 Asks for suggestion, direction, possible ways of action.
- 10 Disagrees, shows passive rejection, disallows, withholds help.
- 11 Shows hostility, asks for help, withholds offer of help.
- 12 Shows antagonism, defines other's status, defends or attacks self.

APPENDIX B

PRE-TEST SCALE FOR PERCEIVED RECOGNITION OF INTERACTION

PRE-TEST SCALE FOR 11/10/1998
 MEASUREMENT OF INTERACTION

Condition _____

Male Female Sample size

Below are a series of statements about the interaction you have just seen. Please place an "X" in the space which best reflects the degree to which you agree or disagree with the statement.

1. The conversations are similar to those people have in everyday interaction.

strongly agree _____ strongly disagree

2. The conversation seemed natural.

strongly agree _____ strongly disagree

3. The conversation seemed awkward.

strongly agree _____ strongly disagree

4. Do you have any particular comments or criticisms in the conversation you have just seen?

APPENDIX C

PRE-TEST SCALE FOR MEASURING LEADERSHIP
INTERPERSONAL ATTRIBUTES AND LEADERSHIP

FOR-VERY SCOME FOR PERSONS AFTER COMMUNICATE

Below are a series of adjective pairs. Please indicate your response to the communication by placing a mark in the space that best reflects your evaluation of the person. The closer your mark is to one of the extreme ends, the more you feel that word represents your attitude toward the communicator. A mark in the center middle position indicates a neutral response to that set of words.

Competent	_____	Incompetent
Social	_____	Unsocial
Warm	_____	Cold
Active	_____	Passive
Question	_____	Believe
Nervous	_____	Relaxed
Outgoing	_____	Withdrawn
Recent	_____	Highly
True	_____	False
Qualified	_____	Unqualified
Easygoing	_____	Stress
Cheerful	_____	Sad
Looking Confidence	_____	Confused
Refused	_____	Uninformed
Illogical	_____	Logical
Good	_____	Bad
Unpleasant	_____	Good Natured
Harsh	_____	Calm
Unfriendly	_____	Friendly
Silent	_____	Talkative

190-9949 SCALE FOR PERCEIVED ATTRIBUTES
INTERPERSONAL ATTRIBUTES

Below are a series of statements about the person.
Please place an "X" in the space which best reflects the
degree to which you agree or disagree with the statement.

1. I think he could be a friend of mine.

Strongly _____ Strongly
agree _____ disagree

2. I wouldn't get anything accomplished with him.

Strongly _____ Strongly
agree _____ disagree

3. It would be difficult to meet and talk with him.

Strongly _____ Strongly
agree _____ disagree

4. He is very deep looking.

Strongly _____ Strongly
agree _____ disagree

5. If I wanted to get things done, I could probably
depend upon him.

Strongly _____ Strongly
agree _____ disagree

6. I find him very attractive physically.

Strongly _____ Strongly
agree _____ disagree

7. He would never establish a personal friendship with
any other

Strongly _____ Strongly
agree _____ disagree

6. He would be a first-class winner.

Strongly

agree

Strongly

disagree

7. I think he is quite handsome.

Strongly

agree

Strongly

disagree

10. I have confidence in his ability to get the job done.

Strongly

agree

Strongly

disagree

11. I would like to have a friendly chat with him.

Strongly

agree

Strongly

disagree

12. I don't like the way he looks.

Strongly

agree

Strongly

disagree

RED-TEAM SCALE FOR STIMULUS ACTOR LEADERSHIP

Answer each of the following items in the same manner as on the previous three pages.

1. I think this person has strong leader-like characteristics.

Strongly agree _____ Strongly disagree

2. I think this person is likely to be a leader in small group situations.

Strongly agree _____ Strongly disagree

3. I think this person would be concerned with other people's point of view.

Strongly agree _____ Strongly disagree

4. Leader _____ Follow-up

5. Concerned _____ Concerned

APPENDIX B
QUANTILE SCALES

PERSONAL SCALE

Subject # _____

Student # _____

Below are a series of statements about the person. Please place an "X" in the space which best reflects the degree to which you agree or disagree with the statement.

1. I couldn't get anything accomplished with him.

Strongly
agree

Strongly
disagree

2. He is very easy looking.

Strongly
agree

Strongly
disagree

3. If I wanted to get things done I could probably depend upon him.

Strongly
agree

Strongly
disagree

4. I find him very irritating physically.

Strongly
agree

Strongly
disagree

5. He would be a poor problem solver.

Strongly
agree

Strongly
disagree

6. I think he is quite handsome.

Strongly
agree

Strongly
disagree

7. I have confidence in his ability to get the job done.

Strongly
agree

Strongly
disagree

Ex. I don't like the way he looks.

disapprove

upset

disapprove

disagree

APPENDIX E
POST-EXPERIMENTAL REACTIONS

POST-CONFERENCEAL PRESENTER

SUBJECT # _____

Condition _____

DISCUSSION:

Look carefully at the TV monitor UNTIL you are sure that you remember which student is number 1; which is number 2; and which is number 3. You will need to keep this in mind as you fill out the following questionnaire. If you should happen to confuse the students, ask the experimenter and he/she will show you the pictures of the three of them again.⁴

Turn to the next page and begin.

⁴These instructions were modified to be appropriate for video-tape and transcription-only conditions of Study 2.

PLEASE ANSWER EACH OF THE FOLLOWING QUESTIONS VERY CAREFULLY. IT IS EXTREMELY IMPORTANT THAT YOU ANSWER EVERY QUESTION AND PLEASE ANSWER ONLY ON THE LINE PROVIDED. MARK NO. 1 OF THE LIST BELOW THAT REFLECTS YOUR OPINION.

1. ON the scales provided below, please rate each of the three students (11, 12, 13) on the aspect of leadership that you think he exhibited during the interview. You feel viewed (heard, read). Name different students (11, 12, 13) who receive the same leadership rating IF you think that they showed equal amounts of leadership during the interview.

A rating of "1" indicates that you think the student exhibited "none or almost no leadership" in the interview. A rating of "5" indicates you think he exhibited an "extremely great amount of leadership" in the interview.

LEADERSHIP RATING FOR STUDENT 11

1	2	3	4	5	6	7
none/ almost no leadership					extremely great amount of leadership	

Now, please indicate on the scale below how confident you are of the leadership rating you just gave STUDENT 11.

1	2	3	4	5
not at all confident				very confi- dent

Leadership rating for Student 12

1	2	3	4	5	6	7
never/					extremely	
almost no					great	
leadership					amount of	
					leadership	

Now, please indicate on the scale below how confident you are of the leadership rating you just gave Student 12.

1	2	3	4	5
not			very	
at all			confi-	
dent			dent	

Leadership rating for Student 13

1	2	3	4	5	6	7
never/					extremely	
almost no					great	
leadership					amount of	
					leadership	

Now, please indicate on the scale below how confident you are of the leadership rating you just gave Student 13.

1	2	3	4	5
not			very	
at all			confi-	
dent			dent	

2. On the scales below, please rate each of the three students (1-10, 11) on how capable they seemed on the basis of the interaction you have just seen. General note: Some different students may receive the same rating if you think that they showed equal amount of capability in the interaction.

A rating of "1" indicates that you think the student showed "some or very little capability" in the interaction. A rating of "9" indicates that you think the student exhibited an "extremely great amount of capability" in the interaction.

Capability Scales For Student 11

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
some/very little capability					extremely great amount of capability	

Capability Scales For Student 12

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
some/very little capability					extremely great amount of capability	

Capability Scales For Student 13

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
some/very little capability					extremely great amount of capability	

2. In the scales below, please rate each of the three students on the amount of influence he appeared to have on either one or both of the other two students during the interaction you have just seen filmed. (Note: Again, different students may receive the same rating if you think that they showed equal amounts of influence on the other members of the group.)

A rating of "1" indicates that you think the student showed "some or almost no influence" on either of the other students during the interaction. A rating of "5" indicates that you think the student showed "a great deal of influence" on either one or both of the other two students in the interaction.

Influence rating for Student #1

1	2	3	4	5	6	7
					extremely great amount of influence	

Now, as you have done before, please indicate how confident you are of the influence rating that you just gave to Student #1.

1	2	3	4	5
			very confi- dent	

Influence rating for Student #2

1	2	3	4	5	6	7
					extremely great amount of influence	

Now, please indicate how confident you are of the influence rating you just gave to Student A1.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
not at all confident				very confi- dent

Influence rating for Student A1

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
none/ almost no influence						extremely great amount of influence

Now, please indicate how confident you are of the influence rating you just gave to Student A2.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
not at all confident				very confi- dent

4. On the scales below, please rate each of the three students as how pleasant each of them seemed, based on the information you have just been shown. (Read again: Different students may receive the same rating if you think that they appeared to be equally pleasant during the interaction.)

A rating of "1" indicates that you think the student was "not at all pleasant" during the interaction. A rating of "5" indicates you think that the student was "very pleasant" during the interaction.

Pinpointing rating for Student #1

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
not at all pleasant						very pleasant

Pinpointing rating for Student #2

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
not at all pleasant						very pleasant

Pinpointing rating for Student #3

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
not at all pleasant						very pleasant

3. Please go back to Question number 2, on the first two pages of this questionnaire. Mark which student (number 1, student number 2, or student number 3) you rated as showing the greatest amount of leadership.

If two students tied with equal ratings for amount of leadership (if you gave them the same leadership rating) then note which two students they were. Similarly, if you rated all three students with exactly the same leadership rating, then note that.

In the space below, write in short sentences for those students (up to a max of 3) who you rated as having the greatest amount of leadership during the leadership time (use your responses in question number 2).

Students) whether _____, _____, _____, _____, _____
 as having the most _____ about it (10/10/10/10/10/10).

Now, I would like you to think back and try to remember what it was about that student (or those students) in terms of a list of things you saw as having the greatest amount of leadership--that made you feel him so highly.

Which of the following adjectives best describes your reasons for rating that student as having the most leadership?

Please place an X in the space provided next to the 25 different adjectives or descriptions listed below which were most central to your thoughts about that student as the leadership student.

- | | |
|---|--|
| _____ is personable | _____ is energetic |
| _____ is responsible | _____ is knowledgeable |
| _____ takes the lead | _____ is the focus of the group's behavior |
| _____ is looked up to the most by the others | _____ makes the decisions |
| _____ is enthusiastic | _____ is persistent |
| _____ regards the other's ideas | _____ offers suggestions |
| _____ is self-confident | _____ has great influence over the others |
| _____ interprets others | _____ summarizes points |
| _____ is confident | _____ offers the best/good suggestions |
| _____ asks questions | _____ is constructive of the others |
| _____ is agreeable with the most | _____ structures the group's interaction |
| _____ is a good listener | _____ initiates group programs |
| _____ is dominating | _____ is satisfied |
| _____ is logical | _____ summarizes most of the group's communication |
| _____ effectively controls the conversation | _____ evaluates ideas |
| _____ is cooperative | _____ mediates disagreements |
| _____ gives the most opinions | |
| _____ is expressive | |
| _____ determines who is to speak by interrupting the most | |
| _____ initiated changes in body position in group members | |

Now, go back to the 25 adjectives or descriptions that you just checked. Of those 25, I would like you to select the five (5) which are the most important. And of those top 5, rank each of them in terms of importance, from "1" to "5." That is, the one adjective or description which was the most important of those ranked in your thoughts as being the most leader-like students--should receive a score of "1." The one

adjectives or descriptions which was the second most important as related to your thoughts in seeing the most leader-like students?--should receive a score of "2," and so on until you have selected the thirty-two or description which was fifth most important or related to you in seeing your leadership rating for the students.

Go back to the preceding page, and number numbers 1, 2, 3, 4, and 5 to the most important five adjectives or descriptions. Then one of these should have its rank assigned a check of 5, then the student on the line to the left of the description. Please make them clearly legible.

Please answer part of the following questions by circling the most correct response. It is very important that you answer each question.

- | | | | |
|---|----------------------------|-------------------------|----------|
| 1. Your age is: | Male | Female | |
| 2. Your age is: | below 17 | 17-24 | 25-34 |
| | 35-44 | 45-54 | 55-64 |
| | over 64 | | |
| 3. Your race is: | Caucasian | Black | Hispanic |
| | Other | | |
| 4. What school do you attend? | Cleveland State University | John Carroll University | |
| 5. Are you a native speaker of English? (Was English the first/one of the first languages you spoke?) | Yes | No | |
| 6. Do you know any of the three CPO students who appeared in the videotape? | Yes | No | |

7. If you selected Yes to question number 4 above, please state which word(s) or which statement(s) you know, and how you know this/these.
8. Do you have a point about what the experimenter was trying to find out by this study? If so, please state your idea below.

*These items were omitted for subjects receiving audio-only or manuscript-only conditions in Study Two.

APPENDIX F

STUDY TWO CONDITION FOUR TRANSCRIPT

(The Low Inflation, Low Growth-like
Economic Condition of Study One)

INTRODUCTION:

This is a verbatim (word-for-word) transcription of a conversation which occurred last year among three Cleveland State University students. These three male students were asked to offer suggestions to help solve the parking problem at Cleveland State.

Please read the conversation carefully--but you do not need to go back and re-read any portions of the conversation. Note the numbers 01, 02 or 03 in the left-hand side of each page. These numbers refer to each of the students. Thus, 01 is student number 1, 02 is student number 2, and 03 is student number 3. This tells you which student is talking at that time. Note that every time the upper lines are double-spaced--you will find that a different student is speaking.

Please read the following conversation. You will be asked to fill out 8 questionnaire items when you have just read when you have finished. If you have any questions, please ask the experimenter.

13 The machine is portable.

1 There are now-half an hour spaces at there are machines.

1 And the machine--

1 And machine machine has been having 100 tickets and having more.

1 Yes, that's right.
I know because I got my own ticket and I got about
three parking tickets. /Laughter/

1 Now, what we need to do is come up with some solutions
for the problem.

1 Right.
Well, I have a suggestion here and we will see whether
it.

1 Well, first, I was thinking that we could, oh

1 Oh, why not use the money from those parking tickets
and having charges for use of a machine at midnight, say
either build additional parking somewhere to replace--

1 Oh, there's no more space for any more late arrivals
now.

1 Oh, or, they could use that money to install some type
of intercom system by which people could park, like
say up to two after midnight from midnight and then will--
will come pick them up from the parking late night 12
or 12 noon--
What do you think?

1 Do you mean like a computer vehicle service?

1 Right, exactly.

1 Oh.

1 That's a good idea. There could probably be turned
from the other for a machine or just to increase the
service to people.

1 There are good ideas. We could--

1 There could

1 We could even have on a daily or quarterly basis.

- 3 With a with a double service, how many different pick up points would we have--
- 1 Well, well--
- 3 I mean, you'd have to have various parking spaces at the computer points.
- 1 We can't decide all the details here; We're just supposed to offer suggestions, right?
- 3 Yeah, we don't have to figure out all the details. Let's leave that for the businessmen.
- 1 Yeah, right. Leave it for the businessmen. Let's just list as many suggestions as we can and not go into details on any of them.
- 3 I think it's been so bad lately, since they closed that lot--
- 1 What about--
- 3 At the university tower, I think that they are building a new lot.
- 1 We could have our people and, and do what companies and business do with our parking incentives.
- 3 What kind of incentives would we use?
- 3 I know is parking, oh, people who car pool get a, a special license or pass for--
- 1 I've heard, I've heard that in New York that the car pools have special license plates--
- 3 They leave the sticker in their car and they are allowed to park most anywhere for free.
- 3 For free?
- 3 I'm not so sure we would be able to do that.
- 3 Well, we are talking about our position for IT Center and Research. I mean, someone would have to figure out who is in proximity to who in order for them and parking to work at all.
- 3 Yeah, right.
But again, we are only supposed to come up with suggestions, we don't have to work out the details.

- 1 I agree with you. I think that we could come up with a few new, general suggestions. But first, why don't you write down, ah, the suggestions we already have.
- 1 OK.
- 1 The more, I was thinking that we could--
- 1 It's possible that the university could work something out with the owner of Willard Square next to King Hall. They say they are half empty all of the time anyway and you could park there and take the bus to campus.
- 1 But that garage is too expensive. I think that garage costs \$2.00 a day and no one is going to park there for that much.
- 1 You could get two or three other students to speak the words of the parking. The price would not be so bad if you are splitting the cost two or three ways. How don't you think that would work?
- 1 That would work. Or, maybe the university could work something out with the owner of the garage so that the school pays so much of the parking costs and the student pays the rest.
- 1 Well, we are talking about within the school, the parking garage operators and the BUS people all for getting, how that's not very likely.
- 1 Let's go back to the outside idea that we had first--
- 1 We could build a new parking lot. They are building one now but only with a couple hundred car spaces.
- 1 Well, even with a big, new lot, how long do you think it would last with increasing enrollment?
- 1 If you look into that, with increasing enrollment in the next couple of years, how about prohibiting first-year cars on campus.
- 1 Oh, oh--
- 1 But, how does that strike you?
- 1 Prohibiting private cars on campus would be severe. Some people have no other way to get home. Oh, because of their work schedules, they can't rely on the BUS system--

- 2 Yes, that's, that's from I guess.
Well then, I think that the trouble here is, is the possibility.
- 3 Yes, the trouble is the possibility.
I think it's a good situation.
- 4 I think the trouble here is that at the best time we've had so far.
- 5 An out there, continuing parking on campus would be a little severe.
- 6 Yes, since some students simply have no other way to get down here.
- 7 Well, you know I think that the only way we can get people to change the parking situation is to offer some reward, some incentive at the end.
- 8 Incentives or rewards aren't always necessary. I know that.
- 9 We could have kids get a (C) student has paid no tickets and if you see the bus so many times a week and have a valid driver's license--if he passes the test--then at the end of the quarter you would have it back and you would--
- 10 Yeah, yes, and when you turn the stamped or punched card, you'd get some kind of reward like maybe a dollar or maybe a free lunch for riding the bus--
- 11 Or they could get--
- 12 Or how about offering reduced parking tickets since for those students who can't park?
- 13 From, they could have special lots for those people who can't park. And they could have reduced parking rates at those lots.
- 14 That would be nice.
But how would you be able to prove that somebody can't park?
- 15 Well, all you would need, all you would have to have is one way of the entrance of the lot for the car problem. You know, if you can't have a people in your car--
- 16 Yeah.
- 17 You don't get in there to park.

- 1 Ah, come on.
How does a car pool mean you have 4 people when you go
in and 4 people when you leave?
- 2 No, what?
- 1 Or do you have 4 people when you go in and 4 people
when you leave?
But what would happen if your car-pool people are sick
someday?
- 1 Well, then you wouldn't be able to park there.
- 2 Ah, come on!
- 1 These are all questions which will have to be worked
out later since we are only offering suggestions. I
think that we are being too far-sighted here.
- 1 Oh, as at this point, we have the idea of the shuttle
bus from other parking areas will work.
- 1 And we have the idea of car pooling with maybe special
lots or reduced parking rates at those lots.
- 1 I think that the shuttle bus idea and the car pooling
idea are the two best ideas.
- 2 Yes.
- 1 First of course like we said earlier, we would have
them build new parking lots or parking areas.
- 2 And possibly they could build more dorms.
- 1 Yeah, they could build more dorms so less people would
have to drive into school. I know lots of colleges are
doing this to live downtown.
- 2 Besides, they are paying us, just maybe--they might
be willing to pay to build more and maybe money on
parking and on gas.
- 2 Yeah!
- 1 Dorms are a good idea.

APPENDIX B

STUDY ONE QUESTIONNAIRE TRANSCRIPT

(The High Influence Low Dependency
Behavior Condition of Study One)

INTRODUCTION

This is a verbatim word-for-word transcript of a conversation which occurred last year among three Cleveland State University students. Since these three students were asked to make suggestions to help solve the parking problem at Cleveland State...

Please read the conversation carefully--but you do not need to go back and re-read any portions of the transcript. Note the numbers (21, 22, etc.) in the left hand side of each page. These numbers refer to each of the students. Thus, 21 is student number 1, 22 is student number 2, and 23 is student number 3. This tells you which student is speaking at that time. Note that every time the typed lines are double-spaced--you will find that a different student is speaking.

Please read the following conversation. You will be asked to fill out a questionnaire about what you have just read when you have finished. If you have any questions, please ask the experimenter.

MI The problem is parking

- 1 Tech There are one-half as many spaces as there are, and and--the--
- 1 And the police have been issuing out tickets
- 1 And traffic control has been issuing 120 tickets and towing cars.
- 1 That's right. I know, because I've got my car towed and I've got about three parking tickets. /Laughter/
- 1 Now, what we want to do is come up with some solution for the problem.
- 2 Right. Well, I have a suggestion here and it all has to do with it--
- 1 First, I was thinking that we could, uh
- 2 Oh, why not use the money from those parking tickets and those tickets, which must be a lot of money, and use that for one of a number of alternatives--either build additional parking somewhere on campus
- 1 Or, there's no more space for any new or additional parking lots anywhere nearby--
- 2 Or, or they could use that money to create that type of a lotter-system system by which people could park late way up to the limit away from campus and buses will, will come pick them up from the parking lots every 15 or 15 minutes. What do you think?
- 1 Do you mean like a commuter shuttle service?
- 1 Yeah, exactly.
- 1 Oh.
- 1 That's a good idea; buses could probably be started from 150 either for a choice of just to increase bus service to campus;
- 1 There are good ideas. We could--
- 1 Buses could--
- 1 We could run buses on a daily or a quarterly basis.

- 1 With a shuttle service, how many different start-up points would you have to spend?
2 How many times--
- 1 Well, of course--
- 1 No more waste parking spaces at the summer points
- 1 Well, we don't decide all the details here. We are just supposed to offer suggestions, right?
- 1 Yeah. We don't figure out all the details. Let's leave that for the bureaucrats, the /bureaucrats/
- 1 Right, leave it for the bureaucrats!
Let's just list all my suggestions as we can and can you later decide on any of them.
- 1 I think it's been so bad here lately, since they closed what was my driveway--
- 1 What chance--
- 1 Yeah. I think that, that they are building a car lot.
- 1 Yeah, that, winding down that lot has made us bad. Well, uh, we should have our people and do what our people and businessmen do for our parking instances.
- 1 What kind of incentives would we need?
- 1 I know that in Portland, people who car pool get a special sticker on their car--that--
- 1 I've heard that is, that is over there the car poolers have special traffic lanes that--
- 1 They leave the stickers in their car and they are allowed to park much anywhere but first--
- 1 For free? Yes, maybe we would be able to do that here.
- 1 Well, we are talking about car pooling for if there are stickers. I mean, someone would have to figure out what is as previously to what is other for this car pooling to work at all.
- 1 Yeah, right.
But again, we are only supposed to come up with suggestions, we don't have to work out the details.

- 1 I agree with you. We are only supposed to come up with a few new general suggestions. But yes, why doesn't somebody write down the suggestions we already have?
- 2 Now, here's some paper. Why don't you write our suggestions down.
- 3 Oh. That's a good idea.
- 1 Yes, now, I was thinking that we could--
- 1 It's possible that the University could work out something with the owner of Willard College next to City Hall. They say it's half empty all the time anyway and you could park there and ride the bus to campus.
- 1 That garage is too expensive. That garage costs 75 for a day--and you're going to have to park there for that much.
- 2 You could get two or three other students to split the costs of the parking. You know, you could divide it up as you if you are splitting the costs but in three ways. Don't you think that would work?
- 2 Yeah, that would work. Or, and, and maybe the University could work out something with the owner of the garage so that the school pays an amount of the parking ticket and the student pays the rest.
- 2 Well, we are talking about getting the school, the parking garage operators, and the STA people all together--you know--that's not very likely.
- 2 Yeah, that's true. Why don't we go back to the electric idea we had first--
- 1 You know, we could have a new parking lot. They are building one now but only with a couple of hundred new spaces.
- 2 Well, even with a big, new lot, how long do you think that will work with increasing enrollment?
- 2 If you look ahead ten, with increasing enrollment in the next couple of years, how about the idea of providing electric cars on campus. How does that strike you?

- 1 Well, replacing private cars on campus would be a little bit better... Some people have no other way to get here. Because of their work schedules, they don't rely on the bus system.
- 2 Yes. That's true I guess. Well then, I think that the shuttle bus is one possibility.
- 1 Yes, the shuttle is one possibility. I think it's a good alternative...
- 1 I think the shuttle bus idea is the best idea we've had so far.
- 1 As for others, prohibiting private cars on campus would be a little better...
- 1 Yes, since some students simply have no other way to get here here.
- 1 Yes, here. I think that the only way that we can get people to choose this parking situation is to offer some reward, some incentive at the end...
- 1 Incentives or rewards aren't always necessary. I know that--
- 1 We could get the kids to get a car student bus pass or ticket and if you use the bus 10 every time a week and have a valid driver stamp, then at the end of the quarter you would bring it back and you would--
- 1 Yeah and when you turn in the passbook or stamped card, you'd get some kind of reward like maybe a dollar or a free lunch for riding the bus--
- 2 Or they could--
- 1 Or how about offering reduced quarterly tuition rates for those students who car pool.
- 1 Those are good ideas. We could have special reserved parking lots for those people who car pool. And they would have a special rate at those lots.
- 2 I don't know. How would you prove that somebody car pools?
- 1 All we would have to have is one guy at the entrance of the lots for the car pools... If you don't have a people in your car--

1 Yes--

1 You don't get in to park there--

1 Does a car pool mean you have 4 people when you go in and 4 people when you leave or do you have--

1 Well, you'd have--

1 Have 2 people when you go in and 4 people when you leave? And what would happen if your car pool people are such cowards?

1 Well, then you wouldn't be able to park there--

1 Oh, I guess that would be possible--

1 These are questions which will have to be worked out later since we are only making suggestions now. I think we are being too far-sighted.

1 At this point we have the idea of the shuttle service from other parking areas off campus.

1 And we have the idea of car pooling with maybe special lots or reduced parking rates at those lots.

1 I think that the car pooling idea and the shuttle busing idea are the two best ideas.

1 Yeah--

1 Plus of course, like we said earlier, they would build new lots or parking houses--

1 And possibly they would build more dorms--

1 Yeah. They would build more dorms so that people would have to drive onto campus. I have lots of kids who would like to live downtown--

1 Besides they are paying rent anyway, they might as well be down here paying cash and carrying books in parking and so forth.

1 You know your idea--

1 Yeah your idea--

1 Your idea about the dorms is a good one.

1 Yeah--

ARTICLE *

TRANSFORMING ORAL AND WRITTEN HISTORY

FROM HISTORICAL INTERACTIONS

IN THE CASE OF DOMINICAN REPUBLIC
TWO, THREE, AND FOUR!

Excerpt 1: Two levels of leader-like behavior:
 two levels of influence

Speaker	Verbal Script	Nonverbal Script
L	The problem is parking. ¹	¹ all others look;
F1	There are not half as many spaces as there are motor-ists ²	
L	And the police-	
F1	And traffic control has been taking \$20,000 ³ and having none.	² all looks up toward none with L; ³ no gestures;
F1	Yes, that's right... I know because I got my car towed and I got stuck there parking tickets /laughing/	⁴ no gestures; L's gesture.
F2	Now, what we need to do is come up with some solutions for the problem. ⁴	⁵ no gestures.
L	Yeah. ⁵ Well, I have a suggestion here and we all can discuss it.	⁶ no gestures; L's gesture.
F2	Well, First, I was thinking that we could, uh	
F1	Oh, why not use the money from that parking tickets and ⁶ having charges for use of a number of alternatives, ⁷ either build addi- tional parking somewhere or ramps.	⁷ all looks up ⁸ F2 is a second shift in posture by F1
F2	Oh, there's no more space for any new lots anywhere nearby.	

* L = designated leader (utter #1)

F1 = designated follower (utter #2)

F2 = designated follower (utter #3)

**Simultaneous gestures simultaneous (intercutted)

speech

Style	Verbal Behavior	Revised Script
B	<p> Ah, or, they could use that money to create some type of information- net system by which people could just line up up to two miles away from campus and buses will pick you pick them up from the parking lots every 15 or 20 minutes. What do you think? </p>	<p> B: Looks at a question to F2 as speech </p>
F2	<p> Is you mean like a computer shuttle service? </p>	
B	<p> Yeah, exactly. 10 </p>	<p> B: shifts back and F2 a F2 watch the shift in your tone. </p>
F2	<p> Oh </p>	
F2	<p> There's good idea. Buses could probably be started from BIA either for a shuttle or just to increase the service to campus. </p>	
F2	<p> There are good ideas. Metrolink-1 </p>	
F2	<p> Buses could </p>	
F2	<p> that could just buses as a daily or quarterly basis </p>	
B	<p> With a, with a shuttle service, how many different pick up points could we have-1 </p>	
F2	<p> Oh, well-1 </p>	
B	<p> I mean, you'd have to have extra parking spaces at the computer point </p>	
F2	<p> We can't decide all the details here. We're just supposed to offer suggestions. Right? 11 </p>	<p> F2: looks up a question to B as speech- </p>
F2	<p> Yeah, we don't have to figure out all the details. Let's leave that for the transportation planning </p>	
F2	<p> Yeah, right, leave it for the transportation. Let's just list as many suggestions as we can and not go into details on any of them </p>	

Role	Verbal Script	Nonverbal Script
L	I think this has to be bad lately, since they finished that 300-1	
E1	What about-1	
L	by the university tower- I think what they are building a new lot...	
E1	We could have our people use, and do their computer and business do with our parking lot...11	
E1	What kind of business would we use?	
L	I know in Portland, oh, people who are paid get a, a special sticker for your car-2	
E2	I've heard! I've heard that in New York that the car owners have special traffic lanes-3	
L	What? Since the cities in their car and they are allowed to pay more expensive tax law?	
E2	How does? I'm not sure we would be able to do that...	
E1	Still, we are talking about our parking lot 17 thousand students I mean, someone would have to figure out who is in possession to who to make the whole car parking to work at all 17	11 E1 looks at a question to L to speak.
L	Yeah, right 21 But again, we are only supposed to come up with suggestions, we don't have to work out the details...14	11 L nods in agreement with E1. 14 E1 nods in agreement with L
E2	I agree with you. I think that we could come up with a few, very general suggestions... But then, why don't you write down, oh, the suggestions we already have...15	15 E1 looks at a question to E1 to write

LINE	ORIGINAL TEXT	RECOMMENDED EDIT
26	OK. ¹⁴	14 It ends an
27	You know, I was thinking that for would-?	15 agreement with it is revised.
11	It's possible that the univer- sity could work something out with the owner of William's garage next to City Hall. They say that the hall sits all of the time anyway and you could park there and take the bus to campus. ¹⁶	16 It should read is disagreement with it.
12	But that garage is too expensive. I think that garage costs \$1.50 a day and so you'd have to park there for that week.	
1	You could get two or three other students to split the cost of the parking. The price would not be so bad if you are splitting the cost for three days. How does that sound? That would work?	
13	That would work. ¹⁷ So, maybe the university could work something out with the owner of the garage so that the school pays no more of the parking ticket and the student pays the rest.	17 It ends an agreement with L.
L	Well, we are talking about getting the school, the parking garage operators and the MTA people all together, and that's not very likely.	
21	Let's go back to the student idea that we had before.	
22	We could build a new parking lot. ¹⁸ They are building one now but only with a couple hundred new spaces.	18 It should form word.

	Verbal Source	Nonverbal Source
12	Well, even with a lay, new law, ¹² how long do you think that'd last, with increasing restrictions? ¹³	12.11 shifted head to disagreement with 12.
1	If you look long term, with less growing restrictions in the next group of years, how about your limited drivers take on campus?	12.11 nodding 12.1's shift. Con- ward.
12	It's ok.	
1	How'd you do that strike just? ¹²	12.1 gestures to 11 to speak.
12	Restrictions against cars on cam- pus would be a service. Some people have no other way to get back. All, because of their work schedule, they can't stay on the bus system.	12.12 shifts head, 11 nodding.
1	Yes, that's true I agree. Well then, I think that the strike you is, is one possi- bility. ¹⁴	12.1, gestures.
11	Yes, the strike is one possi- bility. ¹⁵ I think it's a good alternative.	12.11 nods in agreement with 1 and nodding 1's gesture.
12	I think the strike too idea is the best idea we've had so far. ¹⁶	12.11 nods in agreement with 1 and 11.
1	As for others, increasing parking on campus would be a little better. ¹⁷	12.11 nods in agreement with 1.
11	Yes, since some students simply have no other ¹⁸ way to get back home.	12.11 nods in agreement with 1.
12	Well, you know I think that the only way we can get people to change the parking situation is to offer some good, other incentives at the end. ¹⁹	12.11 looks at a gesture to 11 to speak.

Q1014

FBI - NEW YORK

Interviewed: 8/11/74

1. Sometimes or towards area's
always necessary.²⁰ (I know that)
21. We could have kids get a car
student bus pass or ticket and if
you use the bus so many times a
week and have a valid driver stamp-
so he pushes the card- then at the
end of the quarter you would have
it back and you would-
20. I think, 21. yes. And when you turn
the stamp in pushed card, you'd
get some kind of reward like maybe
a dollar or maybe a free lunch for
feeding the kid-
21. No they would not-
22. He had about offering reduced
quarterly tickets²¹ taken for those
students who can pay-
23. Plus, they would have special lots
for those people who can pay. And
they would have reduced parking
rates at those lots.
24. That would be nice.²²
But how would you be able to prove
that somebody was poor?
25. All, all you would need, all you
would have to have is the pay at
the entrance of the lot and the
car payment. Not have. If you
don't have 4 people in your car-
26. Yeah.
27. You don't get to drive to park,²⁴
28. I think that-
29. Ah, even so-
How does a car pool when you have
4 people then you go in and 4
people when you leave?
30. Oh, what-
20. I think that-

Role	Original Script	Revised Script
Q1	How do you have 2 people when you go in and 3 people when you leave? And what would happen if your car's gone people are still waiting?	
A	Well, then you wouldn't be able to park there.	
Q2	Ah, now not. ²⁰	¹⁹ A shakes head in disagreement with L.
Q3	These are all questions which will have to be worked out later since we are only offering suggestions. I think that we are being too ²¹ far-advanced here...	¹⁴ A shifts up and Q3 + L watch.
L	Oh, as at this point, we have the idea of the electric bus from other parking areas all around.	
Q4	And we have the idea of the parking with ramps around lots or extended parking areas at these lots.	
Q5	I think that the electric bus idea and the car parking idea are the two best ideas.	
L	Yeah. ²²	¹⁷ L nods in agreement with Q5.
Q6	Kind of course like we said earlier, we could have them build new parking lots or parking ramps.	11
L	And possibly they could build more domes.	
Q7	Yeah, they could build more domes so less people would have to drive into school. I know lots of people who would like to live downtown.	
Q8	Maybe, they are saying oh, good, otherwise they might as well be paying more taxes and paying money on parking and on gas. ²³	¹⁸ A questions...

Field	Source Sample	Reviewed Script
40	Trans. 39, 40	<p>39 y2 watches 41% govt/DO</p> <p>40 y1 note is agreement with 41</p>
41	<p>Same as 40 is good. 41-42</p> <p>41</p>	<p>41 y1 note is agreement with 40</p> <p>42 y1 whole book</p> <p>43 y2 note is agreement with 40</p>

Condition 2 (low levels of leader-like behavior,
high levels of influence)

Role	Verbal Behavior	Nonverbal Behavior
L	The problem is parking.	All start back.
F2	Yeah. ¹ There are one-hall as many spaces as there are cars out-there.	¹ F2 nods in agreement with L
L	Said the police have been giving out tickets.	
F2	And traffic control has been keeping 120 ² vehicles and towing cars.	² F2 nods in agreement with L
F2	That's right. ³ I know, because I've got my car towed and I've got about three parking tickets /in-there/.	³ F2 nods in agreement with L
F2	Now, what we need to do is come up with some solutions for the problem.	
L	Right. ⁴ Well, I have a suggestion here and we ⁵ all can discuss it.	⁴ L nods in agreement with F2
F2	First, I was thinking that we could--	⁵ L shifts up and F2: F2 notes the problem shift.
F2	Oh, why not use the money from them parking tickets and towing charges, which would be a lot of money, and use them for one of a number of alternatives--either build additional parking somewhere or change--	
F2	Oh, there's no more space for any new or ⁶ additional parking lots anywhere nearby--	⁶ F2 shakes head in disagreement with F1
L	Ah, so they could use that money to create some type of a inter-urban space by which people could park like hop up to two miles away from campus and leave with, well, some idea that as even the parking lots there is a lot of tickets--What do you think?	⁷ L looks at L gestures to F2 to speak

SOLE	Verbal Script	Nonverbal Script
11	Do you want like a summer shuttle service?	
12	Yeah, exactly. ¹	¹ L shifts head and L1. FD shifts
13	Oh. ²	² FD nods in agreement with L
14	That's a good idea. Buses could probably be rented from RIA either for a party or just to transport bus drivers to camp.	
15	Those are good ideas. We could--	
16	Those could--	
17	That could just buses on a daily or a monthly basis--	
18	With a shuttle service, how many different pick-up points would you have to have? I mean just there--	
19	Well, of course--	
20	L: The hotel where parking spaces at the summer points	
21	Well, we can't decide all the details here. We are just supposed to offer suggestions. Right? ³	³ 21 looks at L questions to L to speak
22	Yeah. We can't figure out all the details. Let's agree that for the summer--uh, uh-- ⁴ /laughter/	⁴ 22 looks at L questions to L to speak
23	Right. ⁵ Leave it for the summer--uh-- Let's just list as many suggestions as we can and not go into detail on any of them.	⁵ 23 nods in agreement with 22.
24	I think the buses we had here last year, since they closed that line by now--uh--	
25	What about--	

Role	Verbatim Script	Harvardian Script
L	know. I think that, that they are building a new lab.	
F2	Yeah. ¹² I think, thinking about that Joe has made it bad. Well, uh, we could have our people and do other companies and businesses the fast and pooling resources.	¹² ET nods in agreement with L. ¹³ ET shifts up.
F1	What kind of incentives would we use? ¹⁴	¹⁴ ET looks at a question to L to speak.
L	I know that in Portland, people who own guns get a special license at guns (blue-thin?)	
F2	I've heard that in, that in New York the car poolers have special traffic license that--	
L	Maybe some the vehicles in their car and they are allowed to park most anywhere for free.	
F1	For free? Um, maybe we could be able to do that here.	
F1	Well, we are talking about car pooling for 110 thousand students. I mean, someone would have to figure out who is in providing to who is order for this car pooling to work at all.	¹⁵ ET shifts up and L watches.
L	Yeah--right. ¹⁶ But again, we not only supposed to come up with suggestions, we don't have to work out the details.	¹⁶ L nods in agreement with F1.
F2	I agree with you. ¹⁷ We are only supposed to come up with a few, and (other) suggestions. And uh, the dean's somebody write down the suggestions we already have? ¹⁸	¹⁷ ET nods in agreement with L. ¹⁸ ET shifts back and L & F watch.
L	Yes, there's some paper. Why don't you write our suggestions down. ¹⁹	¹⁹ L looks at a question to F1 to write.

Scene	Verbal Script	Nonverbal Script
21	OK. That's a good idea. ²¹	21-21 looks in agreement with L.
22	You know, I was thinking that we could--	21 writes.
23	C11's possible that the univer- sity could work out something with the owner of Willard Garage next to City Hall. They say the hall empty all of the time anyway and you could park there and open the bus to campus.	
24	That option is too expensive. 22 That garage costs \$1,000 a day--we can't go to want to park there for that much.	22-22 shakes head in disagreement with C1.
25	You could get two or three other students to split the costs of the parking. You know, the price wouldn't be so bad if you are splitting the cost two or three ways. Don't you think that would work? 21	21-21 looks at a gesture to C1 to split.
26	Yeah, that would work. Or, and, and maybe the university could work out something with the owner of the garage so that the school gets as much of the parking tickets and the student pays the rest.	
27	Well, we are talking about getting the school, the parking garage open- space, and the city people will be involved. The issue--that's not very likely. 21	21-21 gestures.
28	Yeah. 22 That's true. 24 My dad's we go back to the shuttle idea. We had it last--	22-21 watches L's gesture--
29	You know, we could have a new garage built. They are building out now but only with a couple of hundred new spaces.	22-21 looks in agreement with L.
30	Well, even with a big, new lot, how long do you think? What will work with increasing enrollment?	22-21 shakes head in disagreement with 28.

Role	Verbal Content	Nonverbal Behavior
L	Did you look long term, with an evening enrollment in the past couple of years. How about the idea of prohibiting private cars on campus. How does that strike you?	
R	Well, prohibiting private cars on campus would be a little bit better than people have no idea why we get here because of their work schedule, they can't stay in the bus system.	
L	Yes, thank you I guess. Well then, I think that the student fee is our probability. ²⁸	²⁸ L gestures.
R	Yes, ²⁹ the student fee is one possibility. I think it's a good alternative.	²⁹ R mentions L's gestures and nods in agreement with L.
R	I think the student fee idea is the best idea we've had so far. ³⁰	³⁰ R nods in agreement with R1 and L.
L	As for others, prohibiting private cars on campus would be a little better.	
R	Yes, since some students simply have no other way to get down here.	
R	You know, I think that the only way that we can get people to change this parking situation is to offer some reward, some incentive at the end. ³¹	³¹ R looks at L gestures to R1 to speak.
L	Rewards or rewards aren't always necessary. I know (that).	
R	You would get the idea for you a car student has gone on ³² started and if you use the bus on many times a week and have a valid driver's license, then at the end of the quarter you could bring it back and you would.	³² R shakes up.

Bole	Verbal Script	Nonverbal Script
2	Check and when you turn on the puncher or stamped card, you'd get some kind of reward like maybe a dollar or a free lunch for riding the bus.	
21	Or they could. ¹³	22 21 shifts back.
3	Orb how about offering reduced quarterly tuition rates for those students who car pool.	
22	Those are good ideas. We could have special reserved parking lots for those people who car pool. And they could have a special ribbon at their jobs.	
21	I don't know. ¹⁴	24 21 shakes head in disagreement with 21.
3	How would you agree that somebody can pool?	
3	All we would have to have is one car at the entrance of the lot for the car poolers. If you don't have a person in your car-	
21	Yeah. ¹⁵	21 21 nods in agreement with 3.
3	You don't get in to park there.	
22	Once a car pool when you have 4 people when you go in and 4 people when you leave or do you drive?	
3	Oh, you'd have to.	
22	Could 4 people when you go in and 4 people when you leave? And what would happen if your car pool people are also somebody? ¹⁶	24 21 looks at 3 question to 3 in speech.
3	Oh, well, then you wouldn't be able to park there.	
22	Oh, I guess that sounds reasonable. ¹⁷	25 21 nods head in agreement with 3.

File	Verbal Script	Nonverbal Script
17	These are questions which will have to be worked out later when we are only making suggestions now. I think we are being too far-reaching. ³⁸	³⁸ It looks as if contrast to 17 is weak.
18	At these points we have the idea of the electric service from other parking areas off campus.	
19	And we have the idea of car pooling with maybe special lots or reduced parking rates at those lots.	
20	I think that the car pooling idea and the electric parking idea is the two best ideas.	
21	Yeah. ³⁹	³⁹ L looks in agreement with 21.
22	Plus of course, like we said earlier, they could build car lots or parking areas.	
23	And possibly they could build more dorms. ⁴⁰	⁴⁰ L looks in agreement with 23. 23 weak.
24	Yeah! They could build more dorms so less people would have to drive onto school. I hope lots of kids who would like to live downtown.	
25	Besides, ⁴¹ they are paying rent anyway. They might as well be down here paying rent and making money on parking and on gas!	⁴¹ It looks in agreement with 25.
26	You have good ideas.	
27	Yeah, your ideas.	
28	Your idea about the dorm is a good one. ⁴²	⁴² It looks in agreement with 28.
29	Yeah. ⁴³	⁴³ It looks in agreement with 29. 29 weak.

Questions : (High levels of knowledge/low confidence;
low levels of influence)

Index	Verbal Script	Nonverbal Script
1	the problem is parking. ¹	¹ All start back.
12	Yeah, there are practically as many spaces as there are cars.	
1	Yeah that problem sure [sure].	
12	Yeah traffic system has been [has been] taking care [of the] tickets and towing cars.	
11	Yeah, that's right. I know because I've got my car towed and I've got about three parking tickets. /laughing/	
12	well what we have to do here is come up with some solutions for the problem.	² All shift forward 4 ft. a L rough posture shifts
1	Right. Well, I have a suggestion here and we all can discuss it.	
11	I was thinking that we could do-	
1	-Oh why not use that money from those tickets and towing charges or- which must be a lot of money for me it's [a] source of [a] revenue. Either we use additional parking [spaces] on campus.	
12	Oh or there's no more [more] ³	³ All glances head in [direction] with h.
1	Oh- or use that money to create some type of [a] [a] [a] [a] system by which people can park late and up to the [a] [a] [a] [a] [a] [a] [a] [a] will- will come back from up from the late [a] [a] [a] [a] [a] [a] [a] [a] you think?	⁴ h. looks at a gesture to fl to [a] [a] [a]
12	like a computer shuttle [a] [a] [a]	

She:

Journal Entries

September 1971:

4. [Hes.] usually!

El: When could probably be asked that
OK, either for a check-in or just to
know how service to company.

El: Well, they are good ideas.
[at center]

5. When could be

El: We could rent buses on a daily basis.

El: With a shuttle service, how many dif-
ferent pickup points would you have
to have?
[then, you have to have that not
that enough]

6. Well of course!

El: And also have some parking spaces
at all the transfer points.^{3,4}

³El gestures

⁴El shifts back
and El is a little

El: Right.^{5,6}

⁵El explains El's
system.

⁶El adds to
agreement with
El.

7. Well, we can't decide all the dif-
ferent here. We've just supposed to
offer some suggestions, right?

⁷El gestures

El: Yeah.⁸

Let's let them that for the
moment.

⁸El matches L's
gesture.

8. OK, let's leave it for the hour
meeting.⁹ Let's just try and list
as many suggestions as possible and
not go into details on any of them.

⁹El adds to
agreement with
El.

El: You know, I think you have to be
careful this quarter. Some ideas
around that are not by the main-
stay power.
[I think that]

Bole	Language: English	Respondent: Harper
1	They have about 5	
11	I think they are "adding" a few last,	
11	(pause) ¹²	¹² El nods in agreement with El.
11	That I'm not sure.	
11	Yeah.	
1	We could have got people and do what companies and individuals do for the funding initiatives;	
11	What kind of activities could we use?	
1	Well, I know in Portugal, people who are poor get a special sticker or (pause)	
11	I think in New York they use a system where the	
1	-They leave the children in their car and they are allowed to park near anywhere for free.	
11	For lower? ¹³	¹³ El shakes head in disagreement with 1.
11	Oh, well we are talking about our funding for 17 thousand residents New summer come here to Singapore and she is in preparing to start. ¹⁴	¹⁴ El questions.
11	Yeah right, ¹⁵ but again, we are only supposed to come up with suggestions. So don't have to work out details.	¹⁵ El nods and 11's questions.
11	We could have a ride board.	
1	Well, I think I agree with you. ¹⁶ I think we should try to come up with some other potential suggestions. The last thing is why don't you write our suggestions down and we will see what else we can come up with. ¹⁷	¹⁶ El nods in agreement with 11. ¹⁷ El looks at 1 and gestures to 11 to write.

Notes	Worked Script	Revised Script
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11. CH: It's possible that the university would work something out with the owner of Richard's garage next to city hall. They say the hall empty and you could park there.

12. Just that garage is too expensive.

13. We could have the students ride the bus to campus for free.

14. But that garage costs \$1-\$2 a day and no one's going park there for that much.

15. You could get two or three other students to split the costs of the parking.
Now look, the best wouldn't be no bad if you're splitting the price too at \$1000 each.
Look, don't you think that would work?

11. Looks at a question to if he goes

16. Or maybe the university could work something out with the owner of the garage so that the school pays no more of the parking ticket and the students pay the rest.

17. Well, we are talking about getting the car moved, the parking space operators, the RIA people all together, it's not very likely.

18. Another suggestion and it's a weak

18. Let's go back to the student idea that we had first.

19. We could build a new parking lot. They are building one now but only with a couple hundred new spaces.

20. Well even with a big new parking lot, how long do you think that will work with increasing enrollment?

20. If parking.

21. Yeah, 22. If you look back here, the whole increasing enrollment is the main source of stress, how does the idea of prohibiting parking here or campus look how does that strike you?

22. Because it's possible

Rule Verbal Script Unpublished Script

FD He, presumably private cars on some
you could be a little bit worse.
I mean, some people simply have no
other way of getting here.

L Yes, there are. It
I think that that the statistic has to
be something.

20 L shifts back

FI The statistic is not necessarily
it's a good alternative

FI I think it's not been used so far

L As for others, presumably private
cars on campus could be a little
worse.

FD Yes, I mean, since some people simply
have no other way of getting here.

L Now here, I think the only way that
we can get people to change the work-
ing situation is either there must be
an of reward, some kind of incentive
at the end of it.

21 L shifts up

FI Sometimes or rewards isn't always
necessary. (Now I know that is)

FI Like we could have kids get a CDV
for tickets and if they use the bus
on every seven a week and they have a
valid driver's license, so they get the
good parking, then at the end of the
quarter they would have CDV for \$100.

L Okay, and what you have in the
offered or provided and you'd get
some kind of reward like coffee or
cider or maybe a drink would be
riding the bus.

FI Or they could get it

L Or how
about offering reduced parking
rates? Or at least reduced
parking rates.

1941

Verbal Design

Reverend Design

21 Now, they would have special lots reserved for just those people who own pools.

22 That would be alright. But how would you prove that nobody can't afford?

23 Well, there would be lots sold just for those people who own pools only. All it would take would be one way or the other, anyway-- If you don't have a pool in your area.

24 Oh yes.

25 -You don't get in there to pool.

26

27 Hey now, come a car pool area that you have a pool when you go in and a pool when you leave.

28 That will do.

29 You do pool here if people when you go in and a pool when you leave? And what would happen if somebody was sick?

30 Well you-- then you don't get in to pool then. ²⁸

31 Back-- slip off!

32 There are things that will be, have to be worked out. Like when we are only allowing swimming now, oh, I think we are being a little too far-sighted here.

33 I don't know. I mean-- ²⁹

34 Oh. At this point we got the idea of the shuttle bus from other areas off campus.

35 And we have the suggestion of building a new--

36 Oh that's ³⁰

37 It would be too complicated.

38 It would be approved with L.

39 A shuttle back.

40 It should be in disagreement with L.

41 It would be approved with L.

Boyle	Wheeler SCRIPT	Wheeler=1 SCRIPT
1	[grim] we got the idea of not coming with people uh-- ¹⁸ instead lots of colored people enter the show.	¹⁸ L. stands up.
12	I think that the theatre had come and the not coming idea and the two had ideas 17	¹⁹ 12 made in agreement with 11.
1	Yeah, plus like you said earlier, we could build our idea on people's behavior--	11
11	That's people's work. But we should build some. 20	²⁰ 11 made in agreement with 11 11
1	Yeah. And we would write build some more so that people could have to come into school. You know, I want a lot of kids who would like living downtown. 21. They are paying cash money so they might as well be down town people that are coming on parking 21	²¹ 11 made in agreement with 1
12	On parking and on sex?	
12	Yeah. 21	²² 12 made in agreement with 11. 11
12	12	²³ 12 made in agreement with 11 & 1

continues: I think [levels of leader-like behavior,
high [levels of influence]

John	Verbal Script	Nonverbal Script
1	OK. The problem is parking. ¹	¹ All start feet forward.
2	Yeah.	
3	There are one-half as many spaces as there are COWS for the spaces. ²	
4	I had that university traffic service. Has been leaving 900 tickets and taking them.	
5	Yeah, that's right. ³ I know because I've gotten my car towed and I've gotten about three parking tickets. /Laughs/	² He shifts back.
6	Now, what we need to do is come up with some solutions for the problem.	
7	Right. ⁴ Well, I have a suggestion here and we all can discuss it.	³ He head nods in agreement to 5.
8	Good. ⁵	⁴ He nods in agreement to 7.
9	Why not take that money from those tickets and having charged and use it for one of a number of alternatives: parking— 1 construction of campus—	⁵ He head nods in agreement to 8.
10	OK huh. ⁶	⁶ He nods in agreement to 9.
11	Ah, no, use that money to create some kind of the total-campus system by which people can park let's say up to two miles away from cam- pus and buses will, well, come pick them up every 20, 15 minutes. What do you think?	⁷ He looks at a pewee to 10 as speech.
12	Like a commuter shuttle service? ⁷	⁸ He makes a shits forward.

Date	Verbal Script	Revised Script
1	Leth. ⁸	¹ LI nods to EI in agreement.
12	<p>OK, good idea. Now then, I think we could probably get the buses from the old the (transit auth-)</p>	
13	<p>(over) OK, OK, on a daily or quarterly basis</p>	
14	Yeah. ¹⁰	¹² LI nods to L in agreement.
15	<p>How many different picks up points would you have to have? (Lומר?)</p>	
16	(over), you'd have-)	
17	<p>(over) Have to have them far enough out and also have certain parking spaces at all the points. And we would drive the buses? (L)</p>	¹⁴ LI looks at EI in agreement
18	<p>Well, we can't decide all the rules here. We've just suggested to solve some uncertainties. Right?</p>	
19	<p>Yeah. I mean, we can't figure out all the details. Let's leave that for the transportation. (Laughs)</p>	
20	<p>OK.¹² What we need to do then is just to look at any suggestions we can and not go into detail on any of them.</p>	¹⁶ LI nods to EI in agreement
21	<p>You know, I think it's been so hard lately- that quarter since they opened that lot over by the museum city house. I think they are building a new-</p>	
22	<p>(What about car) parking. We could have car use points and we could do other businesses and companies do for our parking investments.</p>	

1011

Robert Burton

Reverend Arthur

12. Yeah,¹² well there would have to be
 incentives because you know, nobody
 is just going to say, "I thought we
 kids with us this week" and every-
 thing will work (out-)
1. Yeah, I know, in Portland, you,
 people who are paid get uh, a special
 sticker or (pass-)
12. Not huh, we could-1
1. Yeah they have on their car, in
 their car, and people are allowed in
 park most anywhere for free.¹³
12. Yeah,¹⁴ we could use, uh
12. Well, you are talking about if
 someone people here, someone would
 have to figure out who is in posses-
 sion with who
11. Yes, his wife, we are only supposed
 to figure out the children
 We don't have to work out the de-
 tails,
1. I think we should try to come up with
 some other special suggestions to uh,
 well first,¹⁵⁻¹⁷ why don't you write
 our suggestions down.
 And we will plan out what we can
 come up with.
11. Oh,¹⁸ 13
- Maybe the university would work
 something out with the owner of
 Willard Square want to buy that
 They say its half owned all of the
 town anyhow and you could park
 (there and uh)¹⁹
1. How would-)
11. -and ride the bus for free to
 campus-
12. That won't work because that garage
 costs \$1.25 a day and nobody's gonna
 pay that much to park.
12. It adds to 1
 is agreement,
12. 2. previous.
12. 2. previous. I's
 question-
12. 2. shifts back
 and 11 a 12
 watch,-
12. 2. previous to
 11 no voice.
12. 11 shifts up
12. 11 writes
12. 11 shifts back.

Date	Verbal Script	Transcript Edited
1	Oh, you could uh, get two or three other uh people to split the costs of the parking. The cost wouldn't be as bad if you are splitting the price two or three ways. ²¹	²¹ I looks at E gestures to E to speak.
11	Maybe the university could work something out with the garage owner so that the school would pay so much of the parking ticket and the student would pay the rest. ²²	²² E1 looks at E gestures to E to respond.
1	Yeah, but you are talking uh, about visiting the school, the parking garage operators, the AAA people all together- that's not very likely.	
11	Unless the school purchased their own buses.	
11	I think we already have some buses.	
11	Not not enough to handle.	
11	Let's go back to the idea of the shuttle.	
11	We could build new parking lots. ²³ Now, they are building one new lot only with a few hundred spaces.	²³ E1 shifts up.
11	But even with a big new parking lot with increased enrollment and all next year, you know that are not going to be enough.	
1	If you look long term, with increasing enrollment is that's such a pain of years, how does the idea of pre-building projects are on campus strike you? ²⁴	²⁴ E1 shifts back. ²⁵ E1 looks at E gestures to E to speak.
11	Yeah. Expanding parking on campus would get a little easier. Oh, some students might have no other ways of getting down here.	
11	Yeah, and besides you know we can't work this thing out overnight.	

Role	Verbal Script	Nonverbal Script
	18	18 J2 nods to J2 in agreement
A	I think that, that the shuttle bus is one possibility. ²¹	19 J2 hand goes up
J1	18 the shuttle bus is a good alternative.	20 J1 reaches L's quarters.
J2	It's the best one we've had so far.	
B	As for others, prohibiting private cars on campus would be a little extreme. Some people simply have no other way to get here.	
J2	Yeah. I mean with their work schedules they can't depend on the bus system.	
A	21 I think the only way that we can get people to change the parking situation is give them some kind of an incentive. You know some kind of incentive at the end. People won't change their behavior without an incentive.	22 J2 shrugs up and F1 & F2 watch.
J1	Yeah, incentives are necessary. 23	24 J2 nods to J1 in agreement.
J1	Like we could get the students on the kids to get a University car, like United and if they see the bus or they have a work and have a valid student stamp, then at the end of the quarter they would turn it back. (mhm)	
B	(mhm) when you turn in the stamped or punched card you'd get some kind of reward like a, yeah maybe a dollar you know, or maybe a (dollar)	
J1	(mhm)	
B	- (yeah for riding the bus. Or, how about offering reduced quantity tickets when the people who are going to the bank refused parking rates. What do you think?	

Page	Verbal Excerpt	Nonverbal Excerpt
10	They could do that. ²¹ And they could have specially reserved lots just for our guests.	²¹ El nods in agreement with L.
12	Are you going to prove that randomly isn't possible?	
1	There could be special lots for those that our pool only. You know, it'd be much like would be our way at the entrance. You know, if you don't have your people in your car-- --you don't get in there to park.	²² El nods to L in agreement.
12	Doesn't possible mean you have 8 people when you go in and 4 people when you leave? Or does it mean you have 4 when you go in and 8 when you leave?	
1	Those are questions which will have to be worked out later since we are only differing suggestions now. ²³ Yeah, I think we are taking two far-flighted here.	²³ El nods to L and nods. It is agreement.
13	Yeah, maybe so.	
1	²⁴ Oh, at this point we got the idea of the change from each other since off campus. ²⁵	²⁴ L shifts back a FI a FI notch. ²⁵ L gestures.
11	Yeah, ²⁶ (and we have--)	²⁶ El watches L's gestures.
1	Of course we've got the idea of not parking with maybe special lots or at least reserved parking LOTS for them.	
13	I think there was one one last place we did. ²⁷ --	²⁷ El nods to L in agreement. ²⁸ El nods to El in agreement.
1	Yeah, other like you said, they would build new parking lots or even the existing lot-- and EV-2	

Role	Verbatim Script	Annotated Script
M		M1 nods to L in agreement.
G	That would build new homes.	L starts up a bit of a match.
L	Yeah, ⁴⁰ and we could even build more homes so less people would have to drive when school. You know, I know lots of kids who have to be downtown living. You know, they are getting out anyway so they might as well be down here paying rent and sitting on parking and gas. ⁴¹ uh-huh	L continues.
G	42-43 That would work.	M2 mistakes L's gesture.
		M3 nods to L in agreement.
M		M4 nods to G that L is agree- ment.

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PERSONAL HISTORY

PAULINE ANN BURTLE was born in Denver, Colorado, March 27, 1915. She lived with mother Marian, father Ed, brother Tom and first beloved dog Betty Ann, in Engle, Pueblo and Lakewood, during all the while the magnificent mountains, desert prairie, and river, the vision of beautiful Colorado. Pauline graduated from Alameda Sr. High in 1937 and attended the University of Colorado at Boulder until graduation in 1941, with a Bachelor of Arts degree in psychology. After having worked in the real-world for two years, Pauline left Colorado and entered the graduate program in social psychology at the University of Florida in Gainesville, in 1943. During her years in Gainesville, she developed an interest in socialization, largely as a result of having the good fortune of joining the membership of the Gainesville Society for the Study of Correlal Behavior. She also developed a life-long interest in the natural arts, met and married her life-partner, Bill, and was adopted by the schoolhouse of perfection, Kappa Kappa Kappa, who is now an equal member of the family. Pauline completed her Master of Arts in psychology in 1945, and continued on in the program as a doctoral student. In

1934, she moved with Bill and Eddie to Cleveland. She served as an instructor in the Communication Department at Cleveland State University and as an assistant professor in Psychology at John Carroll University. Kaitalia completed her Doctorate of Philosophy in psychology at the University of Florida in August, 1941. She intends to continue her research with Bill and Eddie in the west and to attempt to use whatever skills and education she has gained in the first 12 years of her life to work for the survival of the whales, seals, elephants, wolves, gibbons, and all other animals great and small that mankind is so determinedly setting out to destroy and to help save and preserve those habitats that regulate, arrange, guard and the people native now plunder.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Marvin E. Miller, Chairman
Department of Psychology

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Robert C. Miller
Department of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Edwin F. Parker
Professor of Speech, Psychology
Anthropology

I certify that I have read the above and find it
to be a true and correct copy of the original
as it appears in the records of the
Department of the Interior.

Wm. H. Smith
William H. Smith
Assistant Secretary of the Interior

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Wm. H. Smith